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MESOAMERICA
AFTER THE DECLINE
OF
TEOTIHUACAN
A.D. 700–900

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M E S O A M E R I C A
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OF
TEOTIHUACAN
A.D. 700–900

Richard A. Diehl and
Janet Catherine Berlo, *Editors*

Dumbarton Oaks Research Library and Collection
Washington, D.C.



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Library of Congress Cataloging-in-Publication Data

Mesoamerica after the decline of Teotihuacan, A.D. 700–900 / Richard
A. Diehl and Janet Catherine Berlo, editors.

p. cm.

“Outgrowth of a summer seminar entitled ‘Cultural Adjustments
after the Decline of Teotihuacan,’ sponsored by Dumbarton Oaks in 1984”—Pref.

Includes bibliographies and index.

ISBN 0-88402-175-0

1. Indians of Mexico—Antiquities—Congresses. 2. Indians of
Central America—Antiquities—Congresses. 3. Teotihuacán Site (San
Juan Teotihuacán, Mexico)—Congresses. 4. San Juan Teotihuacán
(Mexico)—Antiquities—Congresses. 5. Mexico—Antiquities—
Congresses. 6. Central America—Antiquities—Congresses.
I. Diehl, Richard A. II. Berlo, Janet Catherine. III. Dumbarton
Oaks.

F1219.7.M36 1989
972'.5201—dc19

88-30596

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Preface

THIS BOOK IS AN OUTGROWTH of a Summer Seminar entitled "Cultural Adjustments after the Decline of Teotihuacan," sponsored by Dumbarton Oaks in 1984. I had the pleasure of organizing the seminar at the invitation of Elizabeth H. Boone, Director of Pre-Columbian Studies at Dumbarton Oaks. Its purpose was to study the changes that occurred in Mesoamerica during Phase One of the Second Intermediate period (ca. A.D. 700–900). In a very real sense we were trying to elucidate the basic proposition expressed by René Millon in the paragraph cited at the beginning of the Introduction (see below).

Since this is the first volume to result from the Dumbarton Oaks Summer Seminar program, it seems appropriate to discuss the seminar and its format briefly. In 1982 Boone approached me with the idea of organizing a nine-week seminar in which archaeologists and art historians would study the changes that took place in Mesoamerica during and after the decline of Teotihuacan. I hesitated at first; in fact, my unvoiced reaction was that of a true field archaeologist: "If we want to learn more about this topic, let's go to Mexico and do some excavations!" A few days' reflection convinced me that my original reaction was quite shortsighted and that an examination of the issues and the published literature must be the essential first step to any advances. Further consultation with Boone and Gordon R. Willey convinced me that the seminar would serve a useful purpose in addition to being an exciting intellectual adventure.

The group that convened in Washington in June 1984 consisted of Ellen Baird, Janet Berlo, Jeff Kowalski, and me. Joseph Ball joined us a few weeks later after finishing a field season in Belize. We turned out to be an interesting and delightful mix of art historians (Baird, Berlo, and Kowalski) and anthropological archaeologists (Ball and Diehl). Therein lay one of the real successes of the seminar because we learned as much from each other as we did from our formal studies.

It is an unfortunate reality that while these two disciplines share many interests and goals, their respective practitioners do not have many opportunities to acquaint themselves with the data and perspectives of the other discipline. Dumbarton Oaks encourages cross-disciplinary exchanges, and we all took advantage of this unusual opportunity for in-depth learning. For example, I asked, "What is evidence in art history and how do art historians judge it?" The hour-long discussion that followed taught me more about art history than I had learned in years of cursory reading. Ball and I tried to reciprocate by convincing the art historians

that archaeology consists of more than jargon, multivariate statistics, and cultural materialism. By the end of the summer we all had a much better appreciation of the characteristics and potential contributions of the "other discipline."

In addition to these very real personal benefits from the Dumbarton Oaks experience, each of us learned a great deal about ancient Mesoamerica and our specific topics of concern. Baird concentrated her efforts on a detailed analysis of the Cacaxtla murals while specifically looking for Teotihuacan-derived stylistic elements. Berlo studied the origins of Central Mexican writing systems. I started out with a general perusal of the archaeological data from Central Mexico and Veracruz before settling down to a concentrated search for information on Teotihuacan during its last centuries. Ball and Kowalski spent their time researching Maya topics; Kowalski examined the ethnohistory, art, and archaeology of Yucatan and the Maya Highlands in an attempt to shed light on the elusive Itza of the chronicles, while Ball continued his long-term studies of the equally elusive Putun.

Near the end of the seminar we decided to assemble a publication containing the results of our investigations. Thus this book was conceived. Keenly aware of the geographical and topical gaps in our coverage of the time period, we decided to invite other scholars to contribute to the volume. We agreed that the first step should be a symposium at a major professional meeting. We selected the Society for American Archaeology meetings in Denver, Colorado, in May 1985, and our symposium proposal was accepted by the meeting organizers for inclusion on the program. The five Summer Seminar participants invited Kenneth Hirth, Debra Nagao, and Robert Santley to present preliminary versions of the papers in this volume. William T. Sanders served as discussant for the symposium.

Even this augmented group of contributors fell short of providing the coverage we wanted in the volume, so after the meeting we solicited additional manuscripts from other scholars. Guadalupe Mastache, Robert Cobean, Marcus Winter, Andrea Stone, and Joyce Marcus were invited to write on topics germane to the general era. To maintain the cross-disciplinary spirit of our initial Summer Seminar, we sought summary overviews from both an art historian and an archaeologist. Marvin Cohodas and William T. Sanders complied with our request.

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Introduction

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When it was at its apogee, Teotihuacan influenced the entire civilized world of Mesoamerica. When the city fell, the repercussions of its fall were so great for most of Mesoamerica that we can say that Teotihuacan was as influential in its death as it had been during its life. (R. Millon 1972: 336)

CIVILIZATIONS EXPERIENCE CONTINUAL CHANGE, yet the rates at which this occurs are not regular or constant. Historians and anthropologists have long known that short episodes of dramatic change frequently follow long periods of relative stability. Such episodes are especially common during times of social, economic, and political stress, conditions that invariably accompany the declines of cities and states. These dynamic eras hold a particular fascination for students of civilizations because they serve as bridges between older civilizations and their successors and often establish the cultural and historical matrices for the latter.

This book deals with one such transitional episode in Mesoamerican prehistory: the decline of Teotihuacan in the eighth and ninth centuries A.D. If Millon is correct in the statement quoted above, the demise of this great city triggered one of the most pervasive transformations in the long history of Mesoamerican civilization. This book examines the cultures of that era and the effects that Teotihuacan's decline had on them.

An inquiry into the cultural adjustments that accompanied Teotihuacan's decline could take a number of directions. The most obvious approach would be to conduct field investigations. One could generate ideas or hypotheses grounded in Millon's basic proposition and design a project to test them. However, such a project would have little chance of success unless the investigator had an initial set of propositions to test, and these propositions could only be based on what is already known about the period. Elizabeth Boone realized this when she first proposed a Dumbarton Oaks Summer Seminar on the topic. Her hope, shared by the contributors to this volume, was that the seminar and subsequent publication would create a set of testable ideas suggesting new avenues of investigation to other scholars.

GEOGRAPHICAL SCOPE OF THE BOOK

This volume contains six articles dealing with Central Mexico, three with the Maya area, and one each with lowland Veracruz and Oaxaca. Many areas are notably absent: the southeast Mesoamerican highlands and Pacific piedmont; central and northern Veracruz, especially El Tajin; and north and west Mexico. Several factors account for these lacunae. In some cases scholars working in a given area were unable to contribute for one reason or another; in others there is not enough information to warrant inclusion. Furthermore, complete geographical coverage was not our goal. Our basic question is not one that can be profitably dealt with by democratically examining all regions of Mesoamerica. Some regions and sites played much more important roles than others in the processes that we wish to understand, therefore we focused upon these regions. Nevertheless, we hope that scholars working in areas we have neglected will be sufficiently annoyed by our choices or encouraged by our results that they examine the question from the perspective of their particular region and fill the gaps that we were forced to leave.

TIME AND CHRONOLOGY

Teotihuacan's decline was a complex process that took several centuries to complete. The adjustments that other societies made to it took at least as long, but the primary ones occurred from A.D. 700–900. These dates are approximations and should not be taken too literally. Complex cultural processes do not begin and end at specific points in time as do the reigns of kings. Furthermore, much remains to be learned about Mesoamerican chronology, particularly for this time period. In view of this, we allowed the contributors to trespass our temporal boundaries when they felt that it was necessary.

Teotihuacan's internal site chronology is one of the most important in Mesoamerica. Not only does it serve to delineate the timing of events and processes in the city itself, but it also functions as a comparative linchpin for most chronologies elsewhere in western Mesoamerica. Intensive research by many investigators in the past four decades has produced a well-defined relative chronology composed of sequential ceramic phases and periods (Bennyhoff 1966; Millon 1966, 1981; Rattray n.d., 1979). However, there is still disagreement about when to place this relative chronology in absolute time. Since many contributors to this volume encountered problems with existing chronologies or at least implicitly wished for better chronological controls, it seems appropriate to address the issue of chronology at this point. Although we cannot do justice to the topic in a few paragraphs, we can introduce a complex issue that affects every paper in the volume.

Mesoamerican archaeological chronologies rest upon three basic foundations: (1) Maya Long Count dates inscribed on stone and other materials; (2) ceramic cross-ties demonstrated by stylistic similarities, technological characteristics, and trade wares; and (3) radiocarbon determinations. Archaeologists prefer to use two, and even all three, approaches simultaneously when possible because each has limitations and none can be accepted uncritically. Other dating techniques have been employed with success in Mesoamerica, notably obsidian hydration and archaeomagnetism, but these ultimately depend upon the three approaches mentioned above for placement in absolute time.

Maya Long Count dates are the most precise of the three. Unfortunately, dated inscriptions are found only at selected sites in certain portions of the Maya Lowlands. Furthermore, it is important to remember that archaeologists must *interpret* them and that the interpretations are frequently controversial. The basic controversy concerns the correct correlation of the Maya and the Christian calendars. Virtually all archaeologists and most epigraphers accept the Goodman-Martinez-Thompson 11:16:0:0:0 correlation, but suggested alternatives have proliferated in the past twenty years (see Kelley 1976, 1983; A. Chase 1986), and some differ by several centuries. If some of these alternatives prove to be correct, virtually every Mesoamerican chronology will require adjustment in the period after A.D. 300.

Ceramic cross-ties establish contemporaneity of occupations at different sites on the basis of perceived similarities in pottery. It is difficult to overestimate the role that they have played in the formulation of modern Mesoamerican chronologies. However, even the most careful and skilled ceramic analysts face serious difficulties, and their assessments always involve a degree of subjectivity. Furthermore, comparisons must frequently be based on published sources with inadequate descriptions, poor illustrations, and seriously biased samples. Maya Lowland ceramics are almost the only exception to this generalization; ceramic reports for Uaxactun, Seibal, Altar de Sacrificios, Mayapan, and other sites provide an excellent data base for comparative purposes and exemplify the detailed reporting needed when attempting reasoned ceramic cross-dating.

The use of trade wares of known age to help place an undated site, level, or ceramic complex in time is as old as archaeology itself, and Mesoamericanists have employed it with great success. It has served particularly well to establish relative chronologies, as when Kidder et al. (1946) dated Kaminaljuyu tomb offerings by the presence of Teotihuacan and Lowland Maya trade wares. Its greatest potential as an absolute dating technique occurs with the find of Maya trade pieces which have been accurately dated in the homeland by association with Long Count-dated monuments. Of course the correlation problem presents difficulties, especially at sites like Teotihuacan where the radiocarbon dates are disputed (see below).

Although radiocarbon dating is the foundation for most Mesoamerican chronologies outside the Lowland Maya area, the determinations or "dates" relevant for our time period present a very confusing picture. Several factors account for this situation, primarily the small number of samples that have been submitted for testing. In fact there are so few that they would not inspire much confidence even if all of them "made sense," displayed internal consistency, and agreed with other lines of evidence. Unfortunately many of them fail to do any of the above. The controversies surrounding Teotihuacan's absolute chronology are an excellent case in point: the Carbon 14 readings disagree with each other, while some contradict certain ceramic cross-ties but not others.

Two strikingly different absolute chronologies have been proposed for Teotihuacan in recent times: an "early" one which suggests that the buildings along the Street of the Dead were burned and abandoned by ca. 350, and a more traditional "late" alignment which places those events at ca. 750. Radiocarbon samples collected at the Palacio de Quetzalpapalotl and elsewhere by the INAH Proyecto Teotihuacan in the 1960s provided the initial basis for an "early" chronology (Bernal 1965; Acosta 1964: 52–54). If they are valid, either the central core of Teotihuacan was abandoned several centuries before the remainder of the community, or its entire occupation history must be pushed back several centuries. As pointed out by Millon (1973: 60–61) and others, neither possibility is supported by any evidence except for the radiocarbon dates.

Millon (op. cit.) has defended the more traditional "late" chronology by emphasizing the substantial evidence in its favor and pointing out the probable reasons for the anomalously early radiocarbon determinations. Following Anton Kovar (1966), he argues that the samples came from old beams reused in later structures and that although the laboratory readings may identify the correct death dates of the wood, they have no relevance for the cultural events that they purport to date. The explanations of Millon and Kovar for the early Carbon 14 readings make sense. Construction timber, particularly large beam-sized trees, must have become increasingly scarce in Teotihuacan's later years, and beam reuse would be a natural response to this situation. In fact, according to Millon, ancient instances of beam removal, presumably for reuse, have been observed on the Street of the Dead. Most archaeologists, including the contributors to this book, accept Millon's arguments

and place the burning of the Street of the Dead in the eighth century, a position consistent with the known ceramic crosssties, especially those with the Lowland Maya region.

Although we accept the late chronology, we also recognize that it needs to be improved and refined. Many of the proposed period and phase durations are really guesses and may be off by a century or so. Indeed, one outcome of our involvement in the Summer Seminar has been a growing realization of the need for a comprehensive research project designed to clarify Teotihuacan's absolute chronology. This project should employ every reliable chronometric technique known to archaeometricians, including radiocarbon analyses of various materials, obsidian hydration, archaeomagnetism, dendrochronology, and thermoluminescence. Each technique could serve as a check on the others, and the combined evidence would be much stronger than any single approach. The results would provide crucial information on the durations of ceramic periods and phases, differences in the rate of change at various points in the city's history, and the shifting nature of Teotihuacan's ties with other parts of Mesoamerica.

TERMINOLOGY

Mesoamericanists have proposed many names for these two centuries: Late Classic, Terminal Classic, Epiclassic, Proto-Post-Classic, and Phase One Second Intermediate period all occur in the literature. Of these, Epiclassic is perhaps the most widely accepted in recent times. As originally proposed by W. Jiménez Moreno (1966), the Epiclassic period coincides with the decline of Teotihuacan as a Mesoamerican power. In "The Concept of the Epiclassic," Janet Berlo (this volume, Chapter 13) discusses our reasons for not using the term Epiclassic. Instead we utilize the relatively new "neutral" chronology defined by Price (1976) and Tolstoy (1978) and employed by Sanders, Parsons, and Santley (1979). Thus we refer to the Middle Horizon and Phase One of the Second Intermediate period instead of the Middle Classic and Epiclassic. We prefer these terms because they indicate only time periods rather than the combinations of developmental stages and periods that created endless confusion in the past. However, we have allowed the authors to choose the terms that they prefer rather than impose our choices on them.

Regardless of the terms they employ, most scholars agree that Teotihuacan's decline marked a major turning point in Mesoamerican culture history. Indeed, many archaeologists in the past made too much of its transitional nature. Morley (1946), Thompson (1956), and Wolf (1959), to cite only three of the most influential writers on Mesoamerican prehistory, identified the period as the time when the unique social order and cultural configuration of the Classic period/stage was replaced by a very different Post-Classic civilization. As discussed by William Sanders, in "The Epiclassic as a Stage in Mesoamerican Prehistory" (this volume, Chapter 14), these older reconstructions posited the replacement of the peaceful, theocratic, and artistic civilizations of the Classic by secular, aggressive states and empires whose militaristic art was a decadent perversion of former high achievements.

However, as Berlo and Sanders point out in Chapters 13 and 14, this reconstruction is based on outmoded and false dichotomies. Teotihuacan, the Classic Maya, and their contemporaries engaged in warfare, political expansion, and mercantile activities with as much skill and gusto as did the later lords of Tula, Tenochtitlan, the Mixtec kingdoms, and the Mayapan Confederacy. Maya sculptures once interpreted as priests are now known to be rulers who proclaimed and memorialized their conquests in stone. There is increasing evidence that conflict, aggression, and commerce played pivotal roles in Teotihuacan's successes, and modern scholars have a much greater appreciation of Mesoamerican artistic accomplishments after the decline of "Classic" civilizations than did their predecessors. Furthermore, it is increasingly evident that the distinction between theocratic and secular societies, be they in Mesoamerica or elsewhere, is an unrealistic simplification. These and other reconstructions based on limited information and simplistic notions are being replaced as the discipline grows. Like all interpretations of the past, including our own, the Classic/Post-Classic framework reveals as much about the world views of its proponents as it does about ancient societies.

One corollary of the Classic/Post-Classic dichotomy is the idea that the two centuries after A.D. 700 served as a transitional phase between the two kinds of civilization: a peaceful theocratic Classic social order in contrast to the secular, militaristic societies of the Post-Classic. Yet the articles in this book show nothing of the sort. True, dramatic changes took place, and some of them exerted powerful influences on later cultures, but no really drastic modifications can be detected in economics, subsistence, social organization, urban patterns, warfare, religion, or other cultural basics.

In criticizing older conceptions of Mesoamerican prehistory, we must be careful not to go to the other extreme of believing that post-Middle Horizon societies were mere clones of their predecessors or minor permutations on a basic pattern established by Teotihuacan and the Classic Maya. Significant changes did occur in many realms of life during the thousand years prior to the Spanish Conquest, and many of these originated during Phase One of the Second Intermediate period. Some were minor elaborations on existing forms, while others had profound consequences. An in-depth discussion of all of them is beyond the scope of this introduction, but some of the more important include (1) the emergence of new political centers, (2) population movements, (3) new commercial arrangements, and (4) innovations in religion and architecture.

Virtually all the Middle Horizon power centers were abandoned by the end of the eighth century. New communities soon replaced them, but the processes that account for these changes are not well understood. What is clear is that Teotihuacan's collapse was not a unique event; Monte Alban, Matcacapan, Kaminaljuyu, Coba, Tikal, and other regional centers all failed to outlive it.

The new communities that filled the vacuum included Xochicalco, El Tajin, Uxmal, Kabah, Sayil, and Palenque. Each emerged as a major power in its own region and exerted a measure of influence in distant areas, but none

approached Teotihuacan's size, power, or longevity. It is interesting and undoubtedly significant that most appeared in what heretofore had been politically marginal zones. El Tajin, Xochicalco, the Puuc sites, Palenque, and at a slightly later time Tula, and Chichen Itza arose in areas that served as the hearth of a civilization only once, during the aftermath of Teotihuacan's decline.

The second distinguishing characteristic of the period is population instability. Fragmentary historical accounts which some scholars date to this time reinforce the archaeological evidence for frequent migrations of one sort or another. Small-scale population movements must have been common at all times in Mesoamerica, but these two centuries witnessed dramatic changes in population size, community location, and settlement distribution. In the Basin of Mexico, people dispersed across the landscape in a radically new settlement configuration (Sanders 1981; Sanders, Parsons, and Santley 1979). Similar settlement reorganization seems to have occurred in the Valley of Oaxaca (cf. Blanton and Kowalewski 1981: 107–112; Blanton et al. 1982; Flannery and Marcus 1983: chap. 7), but the chronological problems discussed by Marcus Winter (this volume) raise serious questions about the validity of these interpretations. Surveys in eastern Morelos (Hirth 1984), the Teotlalpan (Mastache and Crespo 1974), north Mexico (Braniiff 1972, 1974), highland Guatemala, the Peten, and Yucatan all corroborate the fact that groups which in some cases had remained in one place for centuries were now on the move.

The evidence suggests at least three kinds of population movements at this time. The most common and the most visible in the archaeological record were small group movements over short distances. They most typically involved movements by groups of related farmers who established themselves in new hamlets or villages near their home settlements. A second type of migration took craftsmen to emerging centers where they could find markets for their skills. Most of these would not have been long treks; obsidian workers, potters, and other craftsmen producing utilitarian goods may have gone only as far as the nearest village or town. Only artisans who produced elite goods from exotic materials would have had the need or desire to move far from their natal communities in search of access to rare raw materials and new markets among the emerging elites of the rising political centers.

Finally, we have the traditional ethnic migrations of the kind recorded in Nahuatl, Yucatec, and Quiche legendary accounts. Regardless of when the events they describe actually occurred, such accounts indicate the types of movements that must have accompanied Teotihuacan's decline. Although these accounts seem to describe long treks by entire societies, they most probably refer to only small groups of elite merchants, warriors, priests, and deposed rulers. Some migrants apparently seized control of their new homes, as has been suggested for Seibal; others undoubtedly melded into their host societies without leaving a trace.

Many of the articles in this book deal with population movements in some form. Richard Diehl discusses local-

ized movements within the Basin of Mexico, while Guadalupe Mastache and Robert Cobean invoke immigration as a factor in the growth of the Tula area. Debra Nagao and Ellen Baird address the question of foreign artisans at Cacaxtla. Jeff Kowalski examines connections between societies in widely scattered parts of the Maya area, and Joseph Ball and Jennifer Taschek investigate the migrations behind Yucatan's tangled Pre-Columbian history. Each writer approaches the problem of population movements from different perspectives and for different purposes, but the mere number of distinctive treatments indicates the importance of these movements to both scholars and, presumably, ancient Mesoamericans themselves.

Mesoamerican long-distance trade and commerce underwent significant modifications after 700. Certain trade routes gained popularity at the expense of others; Teotihuacan's Middle Horizon network into west and north Mexico suffered an eclipse, and the Toltec restoration of trade with these lands in the tenth and eleventh centuries apparently followed different routes and directions. Teotihuacan's longstanding ties with Veracruz to the east lasted until at least A.D. 750 (Rattray 1978). After that, El Tajin apparently functioned as the primary center of the Peripheral Coastal Lowlands (L. Parsons 1978). This zone lies below the 600-m contour and stretches from northern Veracruz to Tabasco, across the Isthmus of Tehuantepec, and southward into northern Central America. Parsons (1978) has shown that its inhabitants played a crucial role in Mesoamerica at this time, and we regret that the volume does not contain a synthetic article on it.

Based on innovations that took root during the latter part of the Middle Horizon, the period L. Parsons (1969) and Pasztory (1978) call the Middle Classic, we find many sites sharing new architectural forms such as ball courts, skull racks, and colonnaded halls. Human sacrifice is displayed prominently in visual media for the first time, although it surely was widely practiced prior to A.D. 700. Deities that may have originated at Teotihuacan, such as Mixcoatl and Xochiquetzal, can now be confidently identified in both household and public art at diverse locales. As both Parsons (1969) and Pasztory have noted, the era during and after Teotihuacan's hegemony was a time of great cultural eclecticism: "Since the new centers were in most cases relatively young and had no great past heritage, they tended to synthesize traditions out of the art of other, older societies with which they desired to establish real or fictitious relationships. The eclecticism of the new centers is evident mainly in works of art but it probably extended to nonmaterial aspects of culture, such as religious cults and intellectual traditions" (Pasztory 1978: 21).

THE CONTRIBUTORS AND THEIR METHODS

The contributors to this book represent a cross section of the two major modern approaches to Mesoamerican research. All are drawn from two disciplines: anthropological archaeology and art history. The archaeologists all belong to the post-1960 generation of scholars who practice the once New but now Orthodox Archaeology. Their approach

shares a great deal with modern archaeology practiced in other parts of the world: it utilizes theoretical models derived from cultural anthropology and other social and natural sciences, attempts to investigate all socioeconomic levels of ancient societies rather than just elites, and emphasizes scientific rigor in the entire research process.

However, at least two characteristics set even the most determined New Mesoamerican Archaeologists apart from colleagues working in other parts of the world. The first is a heightened interest in evolutionary processes, particularly those leading to the formation of complex societies. In perhaps no other part of the world have archaeologists so consistently and effectively integrated this emphasis into every step of the research process.

The second characteristic is an almost Boasian historical particularism expressed in the discipline's continued dependence on Spanish and Native documents for analogues and explanatory frameworks. Despite the efforts of several scholars to introduce a wider comparative perspective (R. McC. Adams 1966; G. Cowgill 1979; J. Marcus, Chapter 12, this volume; and others), Mesoamerican archaeologists remain a rather parochial group without much interest in cross-cultural comparisons. This is partly due to the abundant ethnohistorical sources for the area and is one of the main sources of the humanistic leavening that differentiates Mesoamerican scientific archaeologists from those working in other parts of the world.

The art historians writing in this volume also belong to a "new school" in their discipline. Members of the second generation of Pre-Columbian art historians, they work in a field pioneered by Herbert Spinden and Pal Kelemen and developed as a mainstream intellectual enterprise by George Kubler. In the past three decades this sub-field and the larger study of non-Western art have emerged as vigorous entities with distinct aims, methodologies, techniques, and theory.

While some anthropologists continue to characterize art history as narrowly concerned with style and connoisseurship, this is a badly outdated and simplistic view of the field, as the art historical contributions to this volume attest. Pre-Columbian art history is an acutely interdisciplinary pursuit. Art historians may generally agree that their fundamental working premise is a belief in the primacy of the expressive object as cultural artifact. Beyond this, aims and methods vary. Kubler's cautions to the contrary, most Mesoamerican art historians, like their archaeological colleagues, rely on Colonial and Native documents as interpretive aids (see Berlo 1983; Kubler 1977; Pasztory 1973).

The anthropological archaeologists and the art historians in this volume share a concern with historical reconstruction: what actually happened in Mesoamerica after the decline of Teotihuacan? To examine this issue, and to move into broader issues of causality and interpretation, many approaches are employed. For the archaeologists, of course, fieldwork is the fundamental arena in which to begin answering this question. In Chapter 1, "A Shadow of Its Former Self: Teotihuacan during the Coyotlatelco Period," Richard Diehl draws on the field research of many investigators to show the uniqueness of Teotihuacan's hege-

mony and the cultural transformations that occurred at Teotihuacan after its demise as a major Mesoamerican power. This essay also serves to highlight the gaps that still remain in our knowledge of the critical era late in Teotihuacan's history. Guadalupe Mastache and Robert Cobean's excavations in the Tula area, discussed in Chapter 3, "The Coyotlatelco Culture and the Origins of the Toltec State," further examine this critical juncture in time when Central Mexico experienced a power vacuum prior to the rise of Tula as the dominant polity. They stress that the roots of the Toltec state lie in the multiple strands that formed the Coyotlatelco culture, a heritage derived in part from Teotihuacan and in part from Mesoamerica's northern frontier.

It is clear that archaeological fieldwork must be combined with interdisciplinary methods of analysis to bring into focus a coherent picture of historical events. The archaeologists writing in this volume vary in their emphases on different modes of analysis. Drawing on data from his own research as well as earlier investigations, in Chapter 4, " Militarism and Social Organization at Xochicalco, Morelos," Kenneth Hirth examines archaeological, architectural, epigraphic, and iconographic evidence to discern patterns of militaristic behavior. He uses an ethnographic analogy with the Aztec to suggest great time depth for Central Mexican modes of state-sponsored militarism.

Archaeologist Robert Santley employs a different approach to historical reconstruction in Chapter 8, "Obsidian Working, Long-Distance Exchange, and the Teotihuacan Presence on the South Gulf Coast." His rigorous analysis of the obsidian production and distribution system at Matapan sheds new light on Teotihuacan's economic relationships with one region of the Gulf Coast and demonstrates the value of quantification when dealing with questions about the intensity of commercial contacts.

Archaeological investigation demands a constant stock-taking of the methods, assumptions, and truisms of the discipline. Marcus Winter does precisely this when he questions the basic chronology of the Valley of Oaxaca in Chapter 7, "From Classic to Post-Classic in Pre-Hispanic Oaxaca." His discussion should generate considerable controversy, and his criticisms suggest that a program of chronology building of the type suggested earlier for Teotihuacan may also be needed in the Valley of Oaxaca.

Joseph Ball and Jennifer Taschek attack the vexing problem of reconstructing Yucatan's culture history in Chapter 11, "Teotihuacan's Fall and the Rise of the Itza." They characterize their approach as a "conjunctive" one, in which the archaeological and epigraphic records test and supplement the Colonial historical narratives. Joyce Marcus, in Chapter 12, "From Centralized Systems to City-States," takes a broadly comparative view of the problems that several other contributors examine under a closer lens. Her three case studies of societal dissolution and reorganization highlight cross-cultural parallels that recur when societies experience a certain type of economic and political flux. Her contribution exemplifies processual archaeological reconstruction, going from the particularistic to the normative in order to illuminate the past.

While fieldwork is the first fundamental step for the archaeologist, art historians generally analyze materials revealed by the field research of others. The art historians in this volume use disparate sources to draw conclusions about the nature of culture during the Second Intermediate period. Chapters 2 and 10 are primarily concerned with epigraphy. Janet Berlo, in "Early Writing in Central Mexico," analyzes inscriptions on public monuments and concludes that epigraphic conventions were shared over a wide area during this time. The Central Mexican writing system first appeared at Teotihuacan, and in the post-Teotihuacan era was increasingly used for the historical and economic purposes that preoccupied emerging elites. Jeff Kowalski's essay, "Who Am I among the Itza?," demonstrates through epigraphic analysis the links that were forged among ruling families at several sites in the Yucatan, Pasion region, and Southern Maya Highlands. Epigraphic evidence corroborates what we deduce from archaeological and artistic data: Phase One of the Second Intermediate period may have been an era of shifting alliances and trade partnerships, but it was also a time when emerging powers felt the need to emphasize their ties with each other and with Teotihuacan, the great power of the ancestral past.

In Chapter 6, "Stars and War at Cacaxtla," Ellen Baird conducts a case study of one key symbol in the art of Cacaxtla. This provides an important corrective to the sweeping generalizations often made about so-called "Teotihuacan influence" throughout Mesoamerica. Baird argues that the Teotihuacan-derived star imagery at Cacaxtla not only augments the militaristic message of the murals but also shows links with the Maya area. Ritual warfare and its astronomical connotations were institutionalized over a wide area. In Chapter 9, "Disconnection, Foreign Insignia, and Political Expansion," Andrea Stone takes up similar issues, demonstrating through iconographic and epigraphic analysis that internal political concerns in the western Maya zone motivated their choice of Teotihuacan imagery for public martial display.

Among the art historians, methodological issues are especially prominent in Chapters 5 and 15. In "Public Proclamation in the Art of Cacaxtla and Xochicalco," Debra Nagao's concern with the source and direction of artistic influence leads to a more nuanced analysis of the art of these sites than has previously been attempted. Stressing that public art works were intended to communicate a cosmopolitan image that may not yet have been achieved in actuality, Nagao points out that monumental art works often present a desired rather than a historically accurate reality. While we know this from many historical polities, including the Aztec (see Sanders' comments, this volume, Chapter 14), it is a fact too often forgotten in our quest for

meaning in archaeological artifacts. Marvin Cohodas, in Chapter 15, "The Epiclassic Problem: A Review and Alternative Model," discusses the role of Chichen Itza in the restructuring of Mesoamerica at this time. He provokes a reexamination of received wisdom about this puzzling site, and suggests that Maya and Mexicanized styles were contemporaneous in the Yucatan.

The essays collected in this volume may at first glance appear to be a disparate group. In reality, they engage each other in a dialogue about difficult questions concerning the post-Teotihuacan era in Mesoamerica. The articles by Ball and Taschek, Kowalski, and Cohodas show various possible reconstructions of events in northern Yucatan. They serve to remind us how slippery the footing can be in the realm of cultural interpretation. Ball and Taschek, as well as Cohodas, present particularly controversial conclusions. They use chronology in new and divergent ways and are certain to provoke discussion and reexamination of both archaeological and art historical issues in this region. Winter's discussion of the Valley of Oaxaca provides a comparative perspective on issues examined by these authors in Yucatan, and by Diehl and Mastache and Cobean in Central Mexico.

Hirth notes the diverse responses of different ethnic groups during this era, as they adapted to changing political conditions in different geographic regions. The work of other colleagues in the volume affirms this: Nagao finds unique statements in the art of Cacaxtla and Xochicalco; Cohodas finds unique syntheses of diverse cultural materials at Chichen Itza. Yet there is a similarity in the responses of these different groups to political vicissitudes. Nagao suggests that an increasing concern with militarism was an appropriate response to the unstable political circumstances of decentralized political authority. Events outlined by Mastache and Cobean at Tula, Stone at Piedras Negras, Hirth at Xochicalco, Baird at Cacaxtla, and Cohodas at Chichen Itza all corroborate this. Marcus' discussion of the mechanisms of transformation from centralized authority to factionalized city-states provides background for understanding these struggles.

In summary, the Mesoamerican cultural system as discussed in this volume looks remarkably like many others known in the ancient and modern worlds: concerned with exploitation and marketing of resources, independent centers jockey for power. Great political and cultural centers decline; smaller city-states vie to take their places. Economic gain is inextricably linked to dynastic hegemony: as successor states gain regional strength, they proclaim through iconic display their links to the great powers of the past. As Octavio Paz reminds us, "like biology, history is repetition and change."

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A Shadow of Its Former Self: Teotihuacan during the Coyotlatelco Period

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The luxurious palaces of Teotihuacan were now in ruins, and squatters were living within jerry-built walls thrown across the floors, sometimes placing their dead beneath the old rooms like the former inhabitants. This barbaric occupation persisted for about 300 years after the fall of the city, during which a red-on-buff pottery called Coyotlatelco was manufactured, no rival for the beautiful wares of the Teotihuacanos, but in part fashioned on their model. (Coe 1962: 116)

INTRODUCTION

THIS DESCRIPTION OF TEOTIHUACAN after A.D. 750 once represented the consensus among Mesoamericanists (cf. Armillas 1964: 311; Wolf 1959: 104), and many still accept it today (e.g., Weaver 1981: 225). Archaeologists have long known that portions of the site were burned at the end of the Metepec period (A.D. 650–750) and that the occupations on top of the burned structures clearly indicate that the later inhabitants failed to maintain the high cultural and aesthetic achievements for which Teotihuacan is so justly famous. The most common explanation for this state of affairs is that the original inhabitants deserted the city after the fire and were replaced by culturally impoverished immigrants of the Coyotlatelco period (A.D. 750–950). At the same time Teotihuacan degenerated into a cultural and political backwater with no significance beyond the confines of the Teotihuacan Valley.

However, recent evidence suggests that Teotihuacan remained a major center into the ninth and perhaps even the tenth centuries. For example, René Millon's statement that

It is a pleasure to acknowledge the institutions and individuals who aided me while I researched and wrote this paper. Dumbarton Oaks provided an unparalleled setting in which to conduct the research, and Elizabeth Boone and the Dumbarton Oaks staff did everything they could to help me. My Summer Seminar colleagues provided help and encouragement in too many ways to list. George L. Cowgill has been particularly generous and helpful, especially in allowing me access to unpublished data from the Teotihuacan Mapping Project and reading several versions of the manuscript. I am also in René Millon's debt for access to much of the information discussed in the paper. The Institute of Archaeology of the University of London and Warwick Bray arranged to provide me with an office in which I could work on the paper in the summer of 1985. Sue Scott provided sympathetic and perceptive advice from start to finish. Any errors of omission or interpretation are mine alone.

"large and complex as the post-Middle Horizon community may have been, it was a pale reflection of the great sacred city that had dominated its world for four hundred years or more" (1981: 238) indicates that Coyotlatelco Teotihuacan was something more than a mere squatter settlement. In addition, Evelyn Rattray (1981) has shown that the Coyotlatelco population included craft specialists involved in the same kinds of activities that had been integral components of the Middle Horizon economy. Sanders, Parsons, and Santley (1979) proposed the most radical departure from the old interpretation when they argued that Coyotlatelco Teotihuacan was "a primate center of the first order" (p. 128) and "the largest community in the Basin of Mexico at the time" (p. 131). These diverse interpretations of Teotihuacan after 750 indicate the need for a thorough reevaluation of the community and its role in Basin prehistory.

This paper examines several fundamental issues about Coyotlatelco Teotihuacan and the part it played in regional affairs after the Metepec phase. These issues include Teotihuacan's size, population, demographic history, community organization, economy, and social structure. The paper opens with an examination of the evidence from Teotihuacan itself, then turns to the local and regional contexts in which the community operated. The evidence presented suggests that Sanders et al. are correct and that Coyotlatelco Teotihuacan was much larger and more important than most Mesoamericanists realize.

BACKGROUND

Teotihuacan has been more intensively studied than virtually any archaeological site in Mesoamerica. In addition to

many large-scale excavations since the nineteenth century, the data base includes a systematic survey of the entire urban zone by the Teotihuacan Mapping Project (TMP). Virtually all the structures on the Street of the Dead between the Pyramid of the Moon and the Ciudadela have been partially exposed, numerous residential compounds have been explored, and many smaller excavations have been carried out. Unfortunately the quantity of published information on the excavations is not commensurate with the scale of research effort, and its quality is very uneven. Furthermore, many excavators paid little, if any, attention to the uppermost deposits which contain Coyotlatelco remains. However, Armillas (1950), Linné (1934, 1942), Piña Chan (1963), and Vaillant (1938) all reported Coyotlatelco and Mazapan period debris in the upper levels of their excavations. Armillas was the first to identify the correct stratigraphic relationship between Coyotlatelco and Mazapan ceramics, and his findings still form the basis for the post-Metepec chronology.

Eric Wolf organized a conference on the Basin of Mexico at the University of Chicago in 1959 (Wolf 1976: 5). The participants agreed upon a set of future research objectives which have guided investigations in the area ever since. These objectives were designed to clarify the roles of Teotihuacan and the Basin in the development of Mesoamerican civilization (Sanders et al. 1979: 3). Several of the participants in the conference organized field projects that incorporated these objectives into their research designs, and these projects have revolutionized our knowledge of Basin prehistory.

In the 1960s René Millon's Teotihuacan Mapping Project surveyed the entire site and prepared what may be the most complete archaeological map of any ancient city in the world (Millon, Drewitt, and Cowgill 1973). TMP personnel also collected vast quantities of information on the city's history, craft industries, and many other aspects of Teotihuacan life. Although much of the TMP information is not yet published in final form, the project has completely changed our ideas about Teotihuacan and Mesoamerican urbanism (cf. Millon 1981).

At about the same time, William T. Sanders initiated the Basin of Mexico settlement pattern surveys, a long-term study of human settlement which emphasized an ecologically-based examination of the relationships between human utilization of the landscape and the evolution of civilization (Sanders 1981; Sanders et al. 1979). Between 1960 and 1975 Sanders, Jeffrey R. Parsons, and Richard E. Blanton collected information on 3,800 archaeological sites of all time periods (Sanders 1981). These surveys provide an unprecedented view of entire settlement systems, their changes through time, and Teotihuacan's relationship to its immediate support area.

The Instituto Nacional de Antropología e Historia (INAH) conducted major excavations and restorations along the Street of the Dead and elsewhere in Teotihuacan in the early 1960s (Acosta 1964; Bernal 1963). Although these excavations did not provide as much useful information as one might wish, they confirmed earlier indications

that the Street of the Dead lacks significant Coyotlatelco occupation.

The projects of the sixties inspired numerous investigations in more recent times, including surveys and excavations at Teotihuacan (Cabrera Castro, Rodríguez G., and Morelos G. 1982a, 1982b; Rattray 1981, 1987; Sanders et al. n.d.), in other parts of the Basin, and elsewhere in central Mexico (cf. Bricker and Sabloff 1981; Sanders et al. 1979: 11–12, 30–32). Several of these recent projects yielded important new data on Teotihuacan's Coyotlatelco occupation and others provided useful information from sites and areas outside the city.

The basic outline of Teotihuacan's history is now fairly clear (Millon 1973, 1981). In the five or six centuries after 300 B.C., a cluster of villages grew into a 20 km² metropolis with an estimated 125,000 inhabitants. The Middle Horizon (A.D. 200–650) city included a planned urbanized core with imposing temples and other public buildings, major avenues that divided it into quadrants, and at least 2,000 large apartment compounds. The city's growth affected populations everywhere in the Basin; in fact, it appears that Teotihuacan's rulers deliberately restructured the entire settlement configuration of the area by absorbing some communities and moving others to new locations.

At the same time Teotihuacan's leaders established commercial and political contacts with virtually every region of Mesoamerica (cf. Pasztory 1978; Santley 1983). Ceramics, obsidian tools, and other mass-produced utilitarian items were exported through local and regional networks in return for foodstuffs, raw materials, and specialized finished products. Long-distance exchange emphasized elite luxury goods. In addition to trading products made in the city, Teotihuacan merchants also apparently served as middlemen who moved merchandise from one foreign community to another (Santley 1983). The nature and extent of Teotihuacan's empire is still a matter of debate, but at times Teotihuacanos intervened to one degree or another in local affairs far from their homeland (cf. Bernal 1966; Coggins 1979; Paddock 1972; Sanders and Michels 1977; Berlo 1984).

Teotihuacan's far-flung contacts and commercial networks declined after A.D. 500. The most distant connections were severed first; Guatemala and north Mexico were outside Teotihuacan's orbit by A.D. 600. The precise dates and sequence of events in Teotihuacan's commercial decline are not clear, but its only ties outside Central Mexico after A.D. 700 appear to have been with Veracruz (Rattray 1978). The reasons for the decline are not well understood, but competition from former allies, growth of new centers on its peripheries, increasing bureaucratic inefficiency, and extension of networks beyond their manageable limits all appear to have contributed in some way.

R. Millon (1981: 235–236) and Cowgill (1979a, 1979b) have emphasized that the declines of Teotihuacan's state and the city should be viewed as distinct but related phenomena. Certainly the external problems did not have a noticeable impact on the city itself until the Metepec phase, and even then its size and grandeur diminished only slightly. Although no major new construction activities can be dated to

Metepec times, existing structures were maintained, new murals were painted, and the city continued to prosper.

The events that brought the Metepec phase to an end form one of the most poorly understood episodes in Teotihuacan's long history. According to Millon (1981: 235–239), temples and other public buildings on the Street of the Dead and elsewhere were singled out for ritual destruction and burning. The evidence for burning was known for a long time, but its systematic and highly selective nature only came to light in recent TMP analyses. The causes of the destruction are not known, but most scholars attribute it to invasion or revolt; Millon suggests that the perpetrators intended to eradicate the seats and symbols of Teotihuacan's elite. Contrary to what was formerly believed, however, the burning episode did not mark the abandonment of the city. In fact, the evidence presented below indicates that Teotihuacan remained a major urban center for at least another century.

TEOTIHUACAN DURING THE COYOTLATELCO PERIOD

Chronology

The Coyotlatelco period (Second Intermediate Phase One or SI:1 in the Basin of Mexico chronology) is defined by the presence of Coyotlatelco red-on-buff pottery, a distinctive ware with red geometric designs applied to a buff or yellow background. Coyotlatelco style pottery was first discovered at Santiago Ahuizotla (Tozzer 1921) and since has been found in the Basin of Mexico, the Toluca Valley, Hidalgo, and elsewhere in Central Mexico (Cobean n.d.: 42–43; Rattray 1966: 89–109). Despite its wide distribution, only three detailed studies of Coyotlatelco red-on-buff and the associated plain wares have been published. Evelyn Rattray's (1966) monograph on the Cerro Tenayo materials is still the benchmark publication for the Basin of Mexico, Sanders (1986) contains detailed descriptions of ceramics from several sites in the Teotihuacan Valley, and Robert Cobean's doctoral dissertation provides a good analysis of Coyotlatelco ceramics at Tula (Cobean n.d.).

Coyotlatelco period ceramics at Teotihuacan have never been described in detail, but excavations at the nearby Oxtotipac cave led Sanders (1965, 1986) to divide the period into two phases: (1) Oxtotipac (A.D. 750–800), called proto-Coyotlatelco by Mexican archaeologists (Acosta 1964, 1972; Muller 1966), and (2) Xometla (A.D. 800–900). TMP personnel have not been able to identify Oxtotipac materials in their samples and do not differentiate the two phases. Since much of what follows is based on their data, I will treat the period as a single unit even though the data in Sanders (1986) appears to support the division into two phases.

Dates assigned to the Coyotlatelco period are not based on radiometric or other absolute dating techniques. The beginning date of A.D. 750 is based on the supposition that the Metepec phase ended at that time, but Millon (1973: 71) cautions that Metepec may have ended somewhat earlier. If so, the beginning of the Coyotlatelco period would be adjusted accordingly. The end of the period is also an arbitrary estimate, but four radiocarbon assays from the succeeding

Tollan phase at Tula suggest that Coyotlatelco pottery was no longer in use at that site by A.D. 950 (Diehl 1983: 57).

Community Size and Population

How large was Teotihuacan during the Coyotlatelco period, and how many people lived there? Previous estimates of its size and population vary considerably. Sanders et al. (1979: 130) suggest that it covered five or six km² and contained 30,000–40,000 people. However, Rattray's observation (1966: 100) that Coyotlatelco remains appear to represent physically discrete villages on the periphery of the Middle Horizon urban zone suggests that Sanders et al.'s estimate might be too high.

TMP personnel have not published on the issue of Coyotlatelco Teotihuacan's size, but George Cowgill kindly allowed me access to several unpublished TMP maps showing the distribution of post-Metepec remains at Teotihuacan. With his permission I have incorporated information from them into this paper. Although we essentially agree in our interpretations of the maps at this time, future statements by Cowgill and his colleagues may supersede my interpretation.

The TMP Coyotlatelco map shows the distribution of Coyotlatelco remains in the form of sherd densities. These densities reflect the quantities of surface ceramics actually collected and represent *samples* of what was on the ground. More intensive collection techniques would yield more sherds, thus the numbers and densities themselves have no intrinsic value. However, areas collected by the TMP within the city *can* be compared with one another because the same field techniques were employed in all cases (Cowgill 1974: 366–370, personal communication 1985).

Coyotlatelco pottery covers much of the area occupied during the preceding Xolalpan and Metepec phases (cf. Cowgill 1974: figs. 6 and 7). Densities vary from less than 3 to 200+ sherds per hectare and were calculated using the methods described in Cowgill (1974). In that study densities of 12+ sherds per hectare were interpreted as "very strong evidence of substantial occupation" (ibid.: 372). Using this criterion, my calculations suggest that the Coyotlatelco phase settlement consisted of a large contiguous community covering approximately 11 km² and several isolated settlements south and west of it which cover approximately 2 km². Cowgill (personal communication, 1985) independently calculated 10 km² for the contiguous zone and 2.25 km² for the isolates.

The densest sherd concentrations (50+ per hectare) form an east-west band at the latitude of the Sun Pyramid. Two foci can be discerned within this band: a 1+ km² area west of the Street of the Dead and a .25 km² zone several hundred meters east of the Sun Pyramid. The lower densities between them suggest scattered populations or relatively short-lived occupations. Low densities on and adjacent to the Street of the Dead support the contention that this area had virtually no Coyotlatelco occupation (cf. Acosta 1964, 1967; Romero R. 1982). Other foci of substantial Coyotlatelco debris (50+ sherds per hectare) include small zones on the south, east, and west edges of the

Middle Horizon city which seem to align with the major north-south and east-west avenues. The total area with 50+ sherds per hectare is ca. 2.4 km², and that with 100+ per hectare is only .5 km². Interestingly, the zones of dense Coyotlatelco debris were heavily occupied in earlier Xolalpan and Metepec times.

Several different explanations can be offered for this distribution pattern and the marked variations in sherd densities. Coyotlatelco Teotihuacan may have been a single community with several densely settled areas separated by zones of scattered households. In this case the 11 km² community was certainly large enough to be called a city. Alternatively, the data might reflect several physically discrete, contemporaneous communities located near each other. If so, several are too large to be called villages. Rattray once suggested this possibility, but her recent publication indicates that she now prefers to see the settlement as a single community (Rattray 1966, 1981: 217).

The third possibility integrates both explanations in a diachronic perspective, that is, an original single community in the eighth century disintegrated into several smaller settlements by the end of the period. In this scenario the densely settled zones were occupied during the entire period, while areas with little debris were inhabited for only a generation or two. This alternative seems like the most likely but can be tested only with a more detailed chronology than the one currently in use.

Cowgill has also prepared an unpublished map showing the distribution of pyramids and other artificial platforms with substantial Coyotlatelco surface remains. He classified the twenty locales with one or more such structures into two groups. Group 1 mounds (N=11) have strong evidence of Coyotlatelco occupation, while the evidence associated with those in Group 2 (N=9) is suggestive but ambiguous. Group 1 mounds form an approximate ring near the periphery of the Middle Horizon city. Only three Group 1 structures lie inside this ring, and none are on the Street of the Dead between the Moon Pyramid and the Ciudadela. Some Group 2 buildings coincide with the peripheral ring, but most occur inside it, including one quite close to the Sun Pyramid.

Excavation will be required to determine the functions and construction histories of these buildings, but it is noteworthy that none occur along the Street of the Dead. Excavations in that zone support the idea that Coyotlatelco inhabitants failed to occupy the major Middle Horizon structures that line the avenue; there is no Coyotlatelco pottery at the Palacio de Quetzalpapalotl (Acosta 1964: 56–58), and recent INAH excavations in the Ciudadela also failed to uncover any traces of it (Romero R. 1982).

How many people lived in Coyotlatelco Teotihuacan? This question is difficult to answer until Coyotlatelco residences are excavated, but Cowgill's density figure of 2,500 inhabitants per km² for Patlachique phase (150 B.C.–A.D. 1) Teotihuacan (Cowgill 1974: 383) can be used to formulate a tentative estimate. Despite the eight-century gap, the Patlachique figure should provide a reasonable approximation of the Coyotlatelco density because it reflects an urbanized setting without the unusual constraints on residential space

utilization inherent in the large Middle Horizon apartment compounds. If the two density figures are comparable, the 13 km² area occupied in Coyotlatelco times contained approximately 32,500 people. This figure lies within the range suggested by Sanders et al., and Cowgill (personal communication, 1985) independently estimates a provisional population range of 30,000–35,000.

These admittedly crude estimates are remarkably similar, even though Sanders et al. used an areal estimate only half that apparent on Cowgill's map. Be that as it may, they were certainly correct that Teotihuacan was the largest community in the Basin of Mexico. Cerro Portesuelo, the second largest settlement in the Basin, had only an estimated 12,000 inhabitants (Sanders et al. 1979: 132). Azcapotzalco may have been as large as Cerro Portesuelo, but the site is too badly destroyed to tell. Other regional centers in the Basin had only a few thousand inhabitants each.

In addition to being the largest community in the Basin, Coyotlatelco Teotihuacan may have been Mesoamerica's largest and most densely settled SI:1 period community. Population estimates are not available for Cholula, Monte Alban, and El Tajin during this period, but Xochicalco covered 2 km² (Hirth 1984: 581) and Tula had less than 20,000 people in 5 km² (Diehl 1981, 1983: 43). Only Tikal is known to have been larger than Teotihuacan at this time, and its 49,000 inhabitants were scattered over 63 km², an area almost six times that of Coyotlatelco Teotihuacan (Haviland 1969).

Population Dynamics

The data presented above allow us to examine other demographic issues besides community size and population. One is the magnitude of the population decline during the city's last centuries. If the population declined from 125,000 at the midpoint of the Metepec phase (A.D. 700) to 30,000 halfway through the Coyotlatelco period (A.D. 850), the community lost 95,000 or 76 percent of its initial population in 150 years. This projection involves several questionable assumptions but provides a rough approximation of the overall decline. It suggests an average annual decrease of 633 inhabitants (0.005 percent of the original population). In all likelihood the decline was not a smooth or steady process but one with short episodes of substantial loss separated by periods of more gradual decline or stability. While the true nature of the population profile cannot be understood without more accurate population estimates for shorter time periods, these figures are a useful starting point in a consideration of the problem.

The processes that account for this decline are not known. Archaeologists in the past envisioned a mass exodus at the end of the Metepec phase, a hiatus, and the arrival of a new population using Coyotlatelco pottery. However, the lack of burning in the residential zone suggests a more likely scenario in which most of the inhabitants continued to occupy the existing apartment compounds while transforming their ceramic traditions into what we recognize as Coyotlatelco pottery, and only gradually abandoning the

city during the next century. This second reconstruction seems more realistic than the mass exodus model, but the issue cannot be resolved until we understand the origins of the Coyotlatelco ceramic complex.

The Basin of Mexico surveys suggest that most emigrants did not travel very far regardless of when they left. According to Sanders et al., SI:I settlement patterns indicate that "the basic demographic process was a dispersal of population outward from the huge Middle Horizon center into the more sparsely occupied parts of the Basin. This is most apparent in the occupation of the Texcoco region and, to a more limited degree, in the Chalco and Ixtapalapa regions" (1979: 129). Although the estimated total population in the Basin declined from 250,000 to 175,000, some communities actually grew, and many new settlements were established. Internal population growth and immigration from outside the Basin may account for some of the changes, but emigration from Teotihuacan into the adjacent hinterland must have been the primary factor.

The emigrating units probably consisted of individual families as well as larger corporate units. Single families may have severed their local ties by striking out on their own, or perhaps maintained contacts with Teotihuacan relatives after settling elsewhere. The supra-family corporate units that occupied Teotihuacan apartment compounds may have moved selected members out into the agricultural hinterlands as a means of diversifying their economic base, or entire compounds may have emigrated as single units.

Evidence for emigration by both types of units should be visible in Teotihuacan's archaeological remains. If individual families emigrated, we would expect to see gradual abandonment of rooms and spaces within apartment compounds and the conversion of unused individual living quarters into trash dumps, storage rooms, and other specialized facilities. However, if entire compounds were abandoned in single episodes, there might be evidence for systematic removal of portable utilitarian objects and wealth, perhaps even the bones and grave offerings of revered ancestors interred in courtyard altars and high status burials. There should also be indications that entire structures were abandoned simultaneously. Unfortunately evidence of this sort has not been reported, perhaps because the excavation methodologies commonly used at Teotihuacan in the past would not have detected it.

Teotihuacan's population loss can also be examined from the perspective of different economic groups. Agriculturalists may have made a relatively easy transition if they moved to lands they already controlled or to unclaimed areas. Craft specialists would have been forced to search for new homes where their skills and products were in demand. Declining economic conditions may have led many to turn to farming for a living.

Teotihuacan's population decline may have involved processes beyond simple emigration. Rebecca Storey's study of human skeletal remains from Tlajinga 33, a lower-class Xolalpan and Metepec phase apartment compound occupied by craft specialists, suggests that some of the decline resulted from the cessation of immigration into the city

(Storey 1985). She found that life expectancy at Teotihuacan was fairly low, juvenile mortality high, and general health conditions quite unfavorable. Poor sanitation, crowding, inadequate dry season water supplies, and infectious diseases all apparently contributed to this state of affairs. While recognizing the danger of characterizing the entire urban population on the basis of one apartment compound, Storey argues that "the population had more deaths than births. Thus for at least the latter half of its history Teotihuacan was probably dependent on rural migration to *maintain* its numbers" (1985: 533, emphasis added).

Storey's reconstruction suggests an alternative to the traditional emigration scenario used to explain Teotihuacan's depopulation. If immigration into the city ceased as worsening economic and political conditions made it a less attractive place to live, the population would have declined even without emigration. Theoretically this process might account for the entire population loss, but if so, the settlement pattern changes in other parts of the Basin would be difficult to explain. In all likelihood both emigration and the cessation of immigration played roles in Teotihuacan's demographic changes, but their relative importance is unknown.

Who were the Coyotlatelco inhabitants, and were they genetically or culturally related to their Middle Horizon predecessors? If they were recent immigrants, their cultural and artistic poverty could reflect origins in some geographically and socially marginal homeland. However, if they were direct descendants of the Metepec population and direct heirs to the great Teotihuacan cultural tradition, they experienced one of the most dramatic episodes of deculturation ever documented in Pre-Columbian America. Furthermore, we might ask why they remained at Teotihuacan while many others left, and whether they attempted to preserve their established traditions. Cultural devolution has not received the attention it deserves in Mesoamerican studies outside the Southern Maya Lowlands; Teotihuacan offers an excellent opportunity for such a study.

At the moment there is no evidence on the possible genetic relationships between the two populations. Detailed comparisons of skeletal series from the two groups could prove very enlightening, but such research cannot be done until the necessary remains are unearthed. There is evidence on the cultural side of the issue, but it can be interpreted in three very different ways: Coyotlatelco inhabitants were (1) descendants of the Metepec population, (2) immigrants who displaced or joined the older inhabitants, or (3) squatters who occupied an abandoned settlement.

The origins of Coyotlatelco red-on-buff pottery are the central concern in any analysis of connections between the two groups. Some scholars believe the ceramic style originated outside the Basin of Mexico (Acosta 1972; Armillas 1950: 56; Cobean n.d.: 628–631; Mastache and Cobean, this volume; Rattray 1966: 192), while others (Muller, cited in Bernal 1963: 38–39; Dumond and Muller 1972; Piña Chan 1963: 50; and Sanders, this volume) maintain that at least the Basin of Mexico variant emerged directly from Teotihuacan antecedents.

Cholula and northern frontier societies in Queretaro, Guanajuato, and San Luis Potosi are the most commonly

suggested foreign sources of the style. Coyotlatelco pottery is common at Cholula and other sites in the Puebla/Tlaxcala region (García Cook and Trejo 1977; Muller 1970; Sanders et al. 1979: 133–134) and may coincide with Cholula's emergence as a major independent center. Sanders et al. suggest that the style originated there and subsequently diffused into the Basin.

Unfortunately the confusion surrounding Cholula's history makes it impossible to evaluate its possible role in the dispersal of Coyotlatelco ceramics. Cholula's famous pyramid has been the focus of research at the site (Marquina 1939, 1951: 115–129; Noguera 1954). One INAH project examined areas away from the mound (Messmacher 1965, 1966, 1967) as well as the plaza in front of it (Marquina 1970; Muller 1970, 1973), and archaeologists from the University of the Americas tested nearby areas on the campus and Cerro Zapotecas (Mountjoy and Peterson 1973).

Muller reports Coyotlatelco pottery at Cholula (1970: 142; Muller 1973; see also Dumond and Muller 1972). However, she asserts that either the pyramid or the entire site was virtually abandoned between A.D. 800 and 900; it is not clear which she is referring to. Mountjoy and Peterson (1973) report an SI:1 occupation at Cerro Zapotecas, a hilltop locale apparently located within Cholula's urban limits. In summary, we know that Cholula was occupied between A.D. 750–900 but cannot say anything about its size, importance, or potential as the source of Coyotlatelco pottery.

Arguments for a northern origin of the style call attention to its possible antecedents in the Bajío (Cobean n.d.; Mastache and Cobean, this volume). Unfortunately the northern sites and complexes are dated primarily through cross-ties with the Basin of Mexico sequence rather than by independent evidence (cf. Braniff 1972), and the style may have diffused into that area from Central Mexico. Mastache and Cobean develop a set of arguments for the introduction of Coyotlatelco pottery into the Tula region from the north, but, as Sanders points out (this volume), the direction from which the style was introduced into the Tula region is not clear. Future research in the Bajío may help resolve this issue by firmly dating the possible Coyotlatelco antecedents.

The disagreements surrounding the origins of Coyotlatelco ceramics cannot be resolved until new information is available, but Teotihuacan's size and the presence of Coyotlatelco ceramic workshops (see below) suggest that the city served an important role in its dispersal. In fact I am tempted to use the distribution of Coyotlatelco wares as an indicator of Teotihuacan's economic orbit after A.D. 750, but such an attempt would be premature.

Although the issue of population continuity can be resolved only with detailed studies of skeletal series and entire artifact inventories, Cowgill's maps contain two indications that suggest a basic continuity in the population. One is that dense zones of Coyotlatelco occupation were also densely settled in earlier times. It is difficult to explain why immigrants would have occupied an abandoned city in this specific pattern. At least whatever factors caused earlier population concentrations in these areas con-

tinued in force after the abandonment of the Street of the Dead.

The second indication is that Coyotlatelco people avoided the Street of the Dead and its environs. The most logical explanation for such behavior is that the area was associated with the discredited Middle Horizon elite and their social system. Immigrants might have shared this attitude, but it would probably be strongest among the descendants of the people who destroyed the buildings and the socioeconomic structure they symbolized.

Cowgill disagrees with my interpretation of the continuity in densely settled areas. In a letter of 9 November 1985 he points out that: "Although the major Coyotlatelco sherds concentrations are all in areas that had quite a bit of Metepec, it is important to note that the *relative* shift in the spatial pattern of sherd densities is much greater between Metepec and Coyotlatelco than it was between any of the consecutive phases from Miccaotli through Metepec. Without being decisive, I think this somewhat weakens the case for continuity of population." Regardless of who is correct, we obviously need to learn much more about the relationships between the Coyotlatelco people and their predecessors at Teotihuacan before the dynamics of the period will become clear.

Economics

Much has been written about the role of craft industries and specialized production activities in Teotihuacan's Middle Horizon economy. Obsidian tools, basalt implements, ceramics, and figurines were manufactured in hundreds of specialized workshops in the city; salt was extracted from briny lakeshore deposits; and irrigation agriculture was practiced wherever possible. Several scholars have integrated the economic data into processual reconstructions which attempt to explain how intensive agriculture, craft production, and exchange affected Teotihuacan's evolution and decline (Millon 1973: 45–58; Millon 1976: 228–239; Sanders and Price 1968; Santley 1983; Spence 1981). Thus an examination of the Coyotlatelco economy is a necessary and logical extension of these concerns.

Recent investigations suggest that certain segments of the Middle Horizon economic structure continued to function in Coyotlatelco times, albeit on a reduced scale. Rattray (1981: 215–216) cites evidence for specialized obsidian and pottery workshops in the city, *tezontle* gravel mining for construction materials at the Oxtotipac cave (Good and Obermeyer 1986), and salt extraction at Cerro de la Estrella (Blanton 1972: 97, 192).

Obsidian tool production is the best documented of these activities. Rattray's Hacienda Metepec excavations uncovered a workshop that produced Marcos type projectile points from Otumba source raw material (Rattray 1981: 217–218). The dense debris and lack of diverse products suggest that the occupants were full-time specialists who supplied consumers outside Teotihuacan and perhaps even beyond the Basin of Mexico.

One of the major unanswered questions about the Coyotlatelco obsidian industry is whether knappers had access to

green obsidian from Pachuca. That source provided highly prized raw material in large quantities for Middle Horizon craftsmen, and Pachuca artifacts were traded extensively throughout Mesoamerica. In a survey of Central Mexican obsidian use and manufacturing, Charlton and Spence (1982: 64–67) concluded that the Pachuca sources were not exploited in SI:1. Furthermore, Rattray did not find Pachuca obsidian at the Hacienda Metepec Coyotlatelco workshop. However, Janet Kerley and Robert Santley (personal communication, 1986) report large quantities in excavated samples from rural Coyotlatelco sites in the Teotihuacan Valley, including the Xometla site (Nichols and McCullough 1986). There is no definite proof that these green obsidian artifacts were manufactured at Teotihuacan, but the Xometla assemblage does not include manufacturing debris and the community certainly was within Teotihuacan's marketing orbit. If these tools were manufactured in Teotihuacan, Coyotlatelco craftsmen obviously had access to Pachuca raw material much longer than previously believed.

The organization of Coyotlatelco Teotihuacan's ceramics industry is not clear, but Rattray (1981) cites evidence for at least ten ceramic workshops and possible specialization by vessel type. Thus even if the Coyotlatelco style did not originate at Teotihuacan, the city was a major production center and the industry probably played an important role in its economy.

Although craft industries were clearly present at Coyotlatelco Teotihuacan, we do not know how they were integrated into its economy or how many people depended on them for their livelihood. A host of questions can be raised but not answered. Were most residents farmers or craftsmen? Did potters produce Coyotlatelco and perhaps even later Wavy-line Mazapan ceramics for export, and if so, how widely were they distributed? How widely were Teotihuacan products distributed? Did Teotihuacan's elite pursue political objectives through an economic policy of exporting craft products, and if so, how did their strategies differ from those practiced in the Middle Horizon (Santley 1983, 1984; Sanders and Santley 1983)? When we can answer questions such as these, we will have a much better understanding of Coyotlatelco Teotihuacan's role in the Basin of Mexico and other parts of Central Mexico.

The Regional Context

Just as Middle Horizon Teotihuacan cannot be understood in isolation from its surrounding hinterland, so must the Coyotlatelco community be placed in a regional perspective. Fortunately the SI:1 settlement patterns of Central Mexico are well known, and the changes that occurred after the Middle Horizon are fairly clear.

During the Middle Horizon the Basin and adjacent areas formed an integrated politicoeconomic landscape in which each zone apparently produced its own foodstuffs but also contributed something to Teotihuacan's larger system. Four zones have been identified within the Basin; each served a specific function, and their organization reflected purposeful planning by Teotihuacan's administrators (Sanders et al. 1979: 123–126).

Zone One included the Teotihuacan Valley and adjacent areas. Most of the population resided in the city, but the hinterland contained a few agricultural communities and specialized settlements dedicated to exploiting localized deposits of basalt, clay, and building materials. The central portion of the Basin (Zone Two) had a large population living in substantial communities that adhered to Teotihuacan's norms of community planning and organization. Most of the inhabitants were farmers, but some communities engaged in salt production, lacustrine resource exploitation, and other specialized activities. Zone Three comprised the sparsely settled southern portion of the Basin. Virtually all the communities were small hamlets involved in lacustrine and forest exploitation activities, and some may have been seasonally occupied. The northern part of the Basin (Zone Four) contained one large nucleated village and many smaller settlements. Lime extraction was the major economic activity in this area, and the area's extensive limestone deposits may have been the rationale for settlement in this agriculturally marginal zone.

Several features of Teotihuacan's Middle Horizon system are noteworthy. One is its duration; it functioned for at least five centuries, much longer than any other known Mesoamerican political or economic entity. Furthermore, Teotihuacan dominated its hinterland in a much more thorough fashion than was normal in Mesoamerica. This unusually tight control is evident in the disparities in size and economic complexity between the center and its dependencies. Teotihuacan was many times larger than any other community in the Basin and apparently orchestrated the entire range of productive activities within its domain.

The Basin provided most of Teotihuacan's essential foodstuffs and raw materials, but the city also extended its control into adjacent regions. In southern Hidalgo, Teotihuacanos established Chingu, an administrative center near the site of later Tula. Chingu controlled the area politically and supervised lime extraction activities in nearby deposits (Diaz O. 1980). In Morelos the Rio Amatzinac drainage was converted into a specialized cotton producing zone, and the population was reorganized into numerous small hamlets controlled by a large regional center (Angulo V. and Hirth 1981: 94–95). Northern Tlaxcala was a particularly important region in the Teotihuacan system because it contained a major transportation route leading to Oaxaca and the Gulf coast. This route was controlled by a "Teotihuacan corridor" of communities closely allied with the home city (García Cook 1981; García Cook and Trejo 1977). Thus virtually all of Central Mexico was under Teotihuacan's influence or control during the Middle Horizon.

This regional settlement system and the institutions that it reflected changed dramatically during the Coyotlatelco period. Tula, Xochicalco, and perhaps El Tajin, Cholula, and other centers replaced Teotihuacan as the dominant forces in Central Mexico. Equally drastic changes occurred within the Basin of Mexico. Sanders et al. detect "a profound change in settlement configuration [involving] dispersal of the population outward from the huge Middle Horizon center into more sparsely occupied parts of the Basin" (1979: 129).

Six population clusters emerged within the Basin, each containing a major settlement or capital. Teotihuacan ruled the Teotihuacan Valley Cluster, the polity with the largest population but the smallest area. Sanders et al. estimate that the cluster contained 75,000–80,000 inhabitants, at least half of whom lived outside the city. In addition to containing the largest settlement, the Teotihuacan Valley Cluster had more rural inhabitants than any other cluster in the Basin. It is not clear why people remained so close to Teotihuacan, but the reasons may have included social ties to Teotihuacan residents, a desire to be near producers of things they needed and consumers of their own products, and political constraints. On the other hand, perhaps their ancestors simply were the first emigrants from Teotihuacan and claimed the good lands and irrigation water closest to the city.

The other clusters were centered around Zumpango, Cerro Portesuelo, Cerro de la Estrella, Xico, and the Guadalupe range. Some contained centers of moderate size; others were ruled by large villages. The total population of the individual clusters ranged from 20,000 to only a few thousand inhabitants.

The political and economic relationships between the Teotihuacan Valley Cluster and other societies in the Basin are not clear. Sanders et al. suggest that political fragmentation led to competition among independent polities, while Rattray (1981) sees economic interdependence in a cooperative, nonbelligerent setting. The reality may have been a combination of the two: a form of economic interdependence conducted in a competitive political setting.

The political and economic organization of the Basin would be greatly clarified if we understood Teotihuacan's relationships with the large SI:1 communities at Cerro Portesuelo and Atzacapotzalco. These settlements may have served administrative functions within Teotihuacan's system or may have been independent competitors with it. Their size and presumed power minimally indicate a new, decentralized political structure. This structure may have arisen in response to the troubles that led to the Metepec phase fires, the increasing autonomy of disenchanted elites who left Teotihuacan, or an actual usurpation of Teotihuacan's former rule by emergent new elites. It is also possible that the new centers were autonomous economic entities that supported craft industries in competition with those at Teotihuacan. Whatever the situation, Teotihuacan clearly was unable to control populations and resources in the manner that it had during the Middle Horizon. Nevertheless, its size alone suggests that it exerted some political control within the Basin, and the craft industries indicate its economic power as well.

SUMMARY

Despite the gaps in our knowledge, the evidence suggests that Teotihuacan functioned as a major urban center for at least a century after the Metepec phase conflagration. While the importance of the events culminating in the fire should not be minimized, that event was only a single episode in a long process of decline and occurred at the beginning of the process rather than the end. Seen from

this perspective, the Coyotlatelco period was a very important segment of Teotihuacan's history.

The cultural disintegration that occurred during the Coyotlatelco period involved replacing various elements of Teotihuacan's urban tradition with new but smaller-scale social, economic, and political arrangements. The steps in this process apparently took place at different times. The Metepec phase fire may mark the demise of the traditional elite but certainly not the end of the Teotihuacan urban tradition. Coyotlatelco Teotihuacan was a true city by any definition based on size or economic criteria. However, it apparently lacked an architectural tradition, large public construction efforts, monumental art, and even a definable art style. We cannot even detect an elite, although it surely existed. Apparently the ideology and power that held together the Teotihuacan world for so many centuries ceased to exist and was not replaced. Perhaps their absence ultimately led to the total decay of Teotihuacan's economic and political structure by the end of the Coyotlatelco period. Whatever happened, by A.D. 850 the birthplace of Mesoamerican urbanism had passed into the shadows of Nahuatl myth. There it will remain until archaeologists decide to do something about it.

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Early Writing in Central Mexico: In Tlilli, In Tlapalli before A.D. 1000

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INTRODUCTION

THE AZTECS USED THE METAPHOR *in tlilli, in tlapalli*, literally “the black, the red,” for writing and the recorded events of previous historical epochs. The term derives from the colors traditionally used by scribes in painted manuscripts. By metaphoric extension it further encompasses the traditions and values of the past.¹ Aztec writing, best known from late pre-Conquest and early colonial documents, grew out of the efforts of previous peoples in Central and Southern Mexico. While Mixtec writing, as expressed in pictorial manuscripts from Southern Mexico, has been the topic of many studies, the evidence for earlier writing in Central Mexico is fragmentary, not well understood, and scattered in numerous places. This article will review the evidence for writing from the Middle Horizon and First Phase of the Second Intermediate period in Central Mexico (A.D. 300–1000). After a brief discussion of Mesoamerican glyphic systems, I shall examine evidence for writing at Teotihuacan, and then focus in detail on post-Teotihuacan developments at Xochicalco and Cacaxtla. Coeval sites outside the central area, such as El Tajin and other sites in Veracruz, and slightly later sites, such as Tula, will be examined briefly in relation to epigraphic processes in the central region.

I do not aim to decipher the writing fully (most of the evidence is too fragmentary for convincing decipherment) nor to solve the morass of calendrical questions that these inscriptions raise. However, I shall survey previous contributions and put forth some new hypotheses about ancient Central Mexican epigraphy. My aim is to consider what is, in fact, known about these writing systems and to consider in detail the form and format of their presentation. A

The author gratefully acknowledges the insightful comments made by Ellen Baird, Frances Berdan, John Carlson, Jeanette Peterson, Michael E. Smith, and Emily Umberger on an earlier draft of this manuscript.

See Dibble 1971: 323. Sahagún relates: “The Black, the Red of the Ancient Ones. This saying was said of the customs of the ancient ones—that which they left established, a way of life. All lived accordingly. If all lived not accordingly, it was thus said: ‘May the black, the red of the ancient ones, that is, the customs perish not.’ Or, ‘Why do you destroy the way of life, the black, the red of our grandfathers, the ancient ones?’” Sahagún 1950–82, bk. 6: 258)

comparative analysis of the systems will help to determine their roots, interrelationships, and position with respect to subsequent epigraphic developments in Central and Southern Mexico. It is my thesis that one unbroken, though regionally variable, writing tradition existed in Central Mexico, with its roots in Middle Horizon Teotihuacan and its ultimate flowering in Late Horizon Aztec writing.

WRITING IN MESOAMERICA: THE AZTEC SYSTEM AS A PARADIGM FOR EARLIER EFFORTS IN CENTRAL MEXICO

In comparison with other areas of the world where writing has developed, a very close relationship between text and image was always maintained in Mesoamerica.² Hanns Prem characterizes much of the highly standardized visual imagery of Mexican codices, for example, as “narrative pictography” (1979: 105). In these manuscripts pictorial conventions are nearly glyphic in codification and intention. Yet, as Prem points out, this graphic system is often used in complement with hieroglyphs to record historical or calendrical data with greater precision.

In a similar vein, I have suggested elsewhere that the concept of “embedded text” elucidates the relationship of Mesoamerican texts and images (1983: 11–17). In an embedded text, linguistic content is embedded within the image; art does double duty as logogram and picture. Pun, multiple metaphor, and metonymy are often features of Mesoamerican embedded texts. I shall discuss embedded texts in more detail in the section on Xochicalco. In the Second Intermediate period, Xochicalco demonstrates better than any other site the permeability of the boundary between text and image.

Baddeley sees this interplay between textual and pictorial elements as particularly characteristic of Mexican (as distinct from Maya) cultures (1983: 63). I see it as a pan-Mesoamerican tradition. However, it may be more obvi-

²It may be that a Eurocentric definition of writing as separate from image-making accounts for the low opinion that many Old World epigraphers have of the Mesoamerican systems; leading scholars of Old World writing routinely disparage Mesoamerican writing systems and deny them credit as full writing systems (see Gelb 1963: 53–59). Jensen (1969: 228–240) is slightly more sympathetic.

ous to us in those artistic traditions that lack a complex glyphic system upon which we automatically focus our interest in the written word.³

Like writing systems everywhere, Mesoamerican scripts and notational systems endeavor to convey information in conventionalized format. All Mesoamerican scripts have their basis in pictographic images and vary in their ability to encode complex data. The Aztec and Mixtec systems adequately convey the rudiments of name, place, event, and chronology. Maya hieroglyphs, moving further into abstraction and phoneticism, more successfully convey nuance, detail, and grammatical complexity. The earliest writing system, that of the Zapotecs, seems to lie midway between the Maya system on the one hand and the Aztec and Mixtec systems on the other.

While this is not the place to recapitulate the features of the various Mesoamerican writing systems, I shall briefly outline the basic features of Aztec writing. I intend to focus especially on those aspects that are most germane to our discussion of earlier writing in the region.⁴ Later in this essay I shall demonstrate that some features of the Central Mexican glyphic system exhibit great time depth, having been used from five hundred to a thousand years before the Aztecs came to power.

Aztec writing includes both pictographs (literal renderings of objects and actions) and ideographs (depictions of objects linked by convention to particular concepts, that is, flowers for sacrificial blood, reed mat for rulership, a burning temple for conquest, etc.; see Dibble 1971: 324). Further precision is attained by means of phonetic elements. These function as semantic determinatives, helping the reader deduce precisely which word, out of several possibilities, is being written. Homonyms figure prominently in Aztec phoneticism.⁵ Often one image serves either as pictograph or phonetic element. Context and the reader's own judgment reduce ambiguity.

Dibble (1971: 326) provides examples of this structural versatility in Aztec place names: in the Codex Mendoza the toponym Tequaloyan is a pictograph (Fig. 1a). The name means "place where people are devoured." The image graphically depicts this: a jaguar devours a human, and only the lower body of the human remains outside the mouth. Yet other place names depict the lower part of a human body (*tzintli*) as a phonetic element for *tzin*, "small." For example, the toponym Tenantzinco is comprised of a pictograph (a parapet, *tenamitl*) conjoined to a phonetic homonym (the lower body, *tzintli*), (Fig. 1b). The principle of apocopation, so common in Aztec writing, decrees that the

³For further remarks on this, see Miller 1983.

⁴I shall not, however, restate in great detail the many principles of Aztec writing explicated by others. See, for example, Dibble (1940, 1971), Nicholson (1973), Prem (1968, 1979), Prem and Riese (1983), and Nowotny (1963). Nor shall I repeat the often-discussed principles of calendrics. Caso has almost singlehandedly covered the correspondences between early and late calendrical systems in the central region (1967b). This information does not need repeating.

⁵There is some disagreement about the extent of phoneticism in pre-Conquest Aztec writing. See Nicholson (1973) for a thorough analysis of this issue. Dibble (1960, 1972) believes phoneticism to be predominantly a late, Hispanic-influenced phenomenon. Nicholson provides evidence to the contrary, as does this essay.

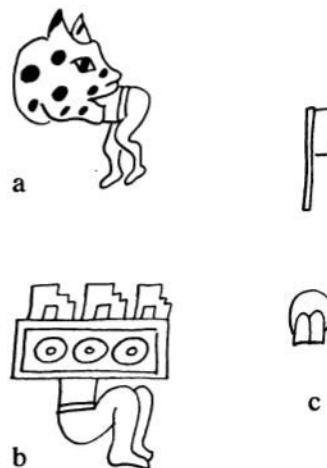


Fig. 1 Aztec writing. (a) toponym, Tequaloyan, (b) toponym, Tenantzinco, (c) locative suffixes *-pan* and *-tlan*. (a & b after Dibble 1971: fig. 1).

last syllable or portion of the word is omitted. We see this in the suppression of the last syllables of both *tenamitl* and *tzintli* to form the name Tenantzinco. Furthermore, in this example the locative suffix (*-co*) is not visually expressed. The reader must add it. More often, locative suffixes such as *-pan* (a flag, *panitli*), or *-tlan* (teeth and gums, *tlantli*) are part of the glyph (Fig. 1c). Like the *tzin* sign just discussed, they are multivalent, sometimes occurring as pictographs, sometimes as locative suffixes, and sometimes as phonetic elements that do not necessarily indicate place.

Aztec glyphs (aside from calendrical glyphs) most often stand for personal or place names. Actions are secondary. Name and place glyphs, both in manuscripts and on monuments, frequently serve as labels or notations to the visual depiction. For example, on the Tizoc Stone, names of regions conquered by the Aztecs are paired with images of the rulers or divine patrons of these places (Wicke 1976; Pasztory 1983: 147–150). Name and place glyphs often comprise historical or political lists, as in the Codex Mendoza or the Matrícula de Tributos. The glyphs rimming the folios of these manuscripts may at first glance suggest linear textual progression. Yet Aztec writing does not include the sort of linear narrative common in Maya hieroglyphic inscriptions. The necessary grammatical apparatus is lacking. In fact, nothing in the Aztec corpus compares even to the glyphic texts on the Xochicalco stelae triad, for example (Fig. 15). (As we shall see in a later section of this essay, these are remarkably laquacious texts for the Central Mexican tradition.)

WRITING AT TEOTIHUACAN?

Recognition of the political and economic preeminence of Teotihuacan during the Middle Horizon inevitably brings up questions about the necessity for record keeping and written traditions for such a vast administrative empire. There is no doubt that widely understood logograms or conventional signs were an important aspect of visual communication at Teotihuacan. Many such signs have been catalogued by Kubler (1967), von Winning (1961,



Fig. 2 Mural fragments from Techinantitla, Teotihuacan. (a) Milwaukee Public Museum no. 56931, photo courtesy of the Milwaukee Public Museum; (b) Museum of Art & Archaeology, University of Missouri-Columbia no. 71.136, photo courtesy of the Museum of Art & Archaeology.

1979, 1987), and Millon (1973). Kubler characterized Teotihuacan art as “less interested in recording appearances than in combining and compounding associative meanings in a quest for viable forms of writing” (1967: 5).

Thomas Barthel suggests that true “texts” exist at Teotihuacan. He has characterized the symbols cascading from hands and speech scrolls in Teotihuacan mural painting as “infix graphemes” (1982: 5), noting their occasional “columnar” placement and “vertical text progression” (1982: 7). Trying to force the rich and varied manifestations of Teotihuacan logograms and symbols into a linear pattern of texts seems fundamentally misguided; the search for linear texts at Teotihuacan imposes a Western-style notion of writing upon a vastly different communication system. While many Maya and Zapotec texts do follow a

linear format, Central Mexican texts, as we shall see, seldom do.

A much more productive approach has been put forth by James Langley. In an important study, *Symbolic Notation of Teotihuacan* (1986), he examines the structure of glyphic representation at Teotihuacan. He chooses the term “notation” or “notational sign” for those symbols at Teotihuacan that are closer to writing than mere iconographic motifs, yet less highly systematized than the coeval Zapotec and Maya glyphic systems. Langley persuasively shows that at Teotihuacan “information is encoded in patterned sets of signs whose arrangement [reflects] both the conventions of the notational system and the substance of the communication” (1986: 13).

My own research reveals that, in a few instances,

Teotihuacan signs seem to approach the mixed pictographic and phonetic character of Aztec writing, where the aim is to render mnemonically personal and geographic names. Mural fragments from one residential compound at Teotihuacan provide tantalizing glimpses of this Central Mexican glyphic system in its formative stages. I shall briefly discuss these images to set the stage for the subsequent development of writing in Central Mexico.

In the murals from the Teotihuacan compound that René Millon has named *Techinantitla*,⁶ a large feathered serpent forms the border for rows of flowering plants. The blossoms and leaves of the plants vary, although some foliar forms repeat (Fig. 2a–b). At the base of each plant, directly above the gnarled roots, are glyphlike signs. In the known corpus of fragments, twelve different signs occur on thirty-one trees. Some signs are simple and pictographic: a repeated maguëy spine, a shell. Others are compound and abstract: a trilobed sign under a feathered eye, or a netted ovoid.

Some signs are comprised of graphemes that occur in later Nahuatl place names, as well as in glyphs at Cacaxtla and elsewhere. Most of these recurring signs are pictures of ordinary objects—maguëy spines, eyes, bones, arms, etc.—therefore it is hazardous to suggest a linguistic or geographic connection with specific Aztec toponyms. However, it seems likely that in these murals Teotihuacan scribes were employing a mixed phonetic, pictographic, and ideographic system of recording names or places much like that used by their Aztec descendants.⁷

For example, in one of the murals at the de Young Museum, the glyph compound at the base of the tree is a tripartite sign consisting of a severed human arm surmounted by a bivalve shell attached to a sheaflike object (Fig. 3a). To my knowledge, no such compound exists in the Aztec vocabulary, but a severed human arm occurs as the main sign for Acolhuacan, Coliman, and several other toponyms in the *Codex Mendoza*. There the arm (Nahuatl: *acolli*) is the phonetic clue to the place name (Fig. 3b–c). In another Teotihuacan mural fragment, at the Milwaukee Public Museum, three maguëy spines are painted at the base of the tree (Figs. 2a, 4a). Maguëy spines form the Nahuatl place name signs Huitznahuac and Huitztlan (Nahuatl: *huiztli*, thorn, spine) (Fig. 4b).

Varying flower and leaf types on the Teotihuacan trees may point to both botanical species and place name designations. In Aztec toponymy, numerous trees serve as place signs, among them the avocado and zapote for Ahuacatlan and Tzapotlan respectively (Fig. 5). In both these cases the

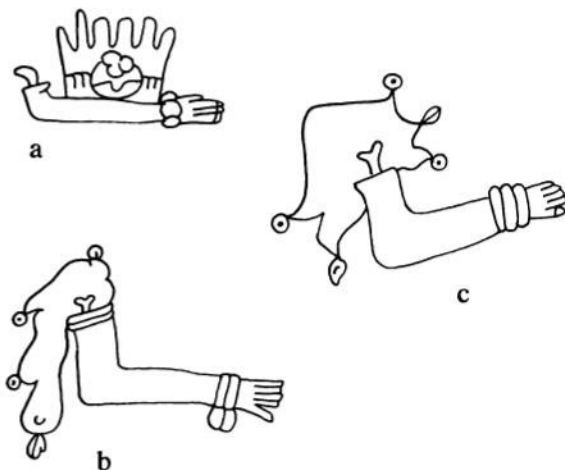


Fig. 3 (a) Possible toponym, Teotihuacan mural fragment, de Young Museum, San Francisco, after Braun 1982: 102; (b) Acolhuacan, *Codex Mendoza*; (c) Coliman toponym, *Codex Mendoza*.

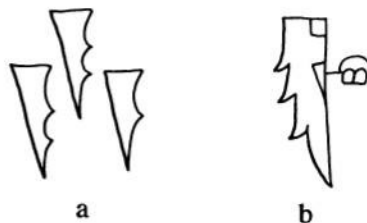


Fig. 4 (a) Possible toponym, Teotihuacan mural fragment, Milwaukee Public Museum; (b) Huitztlan toponym, *Codex Mendoza*.

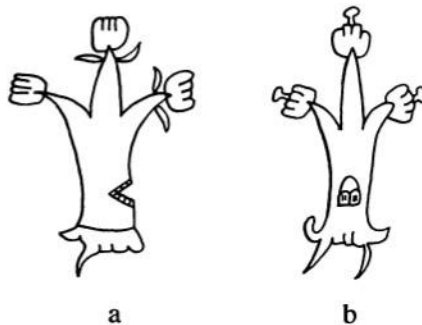


Fig. 5 Toponyms from the *Codex Mendoza*. (a) Ahuacatlan; (b) Tzapotlan.

pictorial locative suffix *tlan* (teeth) is incorporated into the image.

As I shall discuss in the following pages, some glyphs at Cacaxtla and Xochicalco are of Teotihuacan origin, such as the reptile eye, the Tlaloc mouth, and the trilobed glyph. These are familiar and ubiquitous in Teotihuacan iconography. The *Techinantitla* murals depict other, less well known signs subsequently used at Cacaxtla and Xochicalco too. In one fragment the glyph consists of a flower with infixed eye, and trilobed symbol below (Figs. 2b, 6a). This is at least schematically related to the Cacaxtla blood glyph

⁶In 1984 René Millon conducted limited excavations in this compound, which he has named *Techinantitla*. Mural fragments from unauthorized excavations in this structure in the 1960s are in the collections of the de Young Museum in San Francisco, the Milwaukee Public Museum (no. 56931), and the Museum of Art and Archaeology at the University of Missouri-Columbia (no. 71.136). The de Young Museum, which has a large and cohesive collection of these fragments (see Braun 1982), is publishing a scholarly catalogue on them (Berrin 1988).

⁷While this glyphic data and much iconographic data suggest to me that Teotihuacanos may have been Nahuatl speakers, linguistic opinion is sharply divided on this point. For a concise review of the issue of Nahuatl and pre-Nahuatl languages in the Basin of Mexico and Morelos, see Smith 1983: 17–26.

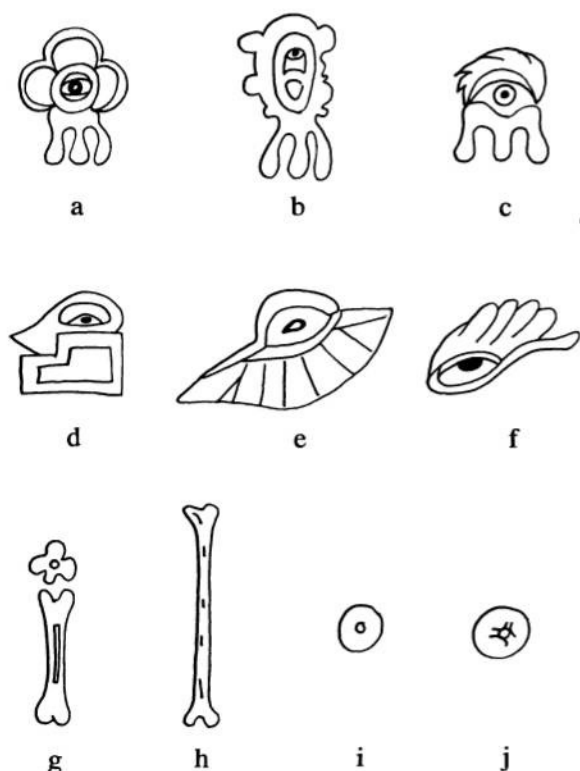


Fig. 6 Glyphic correspondences between Techinantitla murals, Cacaxtla, and Xochicalco. Eye and blood glyph: (a) Techinantitla, (b) Cacaxtla, (c) Techinantitla. Eye glyph: (d) Techinantitla, (e) Xochicalco, (f) Cacaxtla. Bone glyph: (g) Techinantitla, (h) Cacaxtla. "Button" glyph: (i) Techinantitla, (j) Cacaxtla.

which also infixes the eye and has a pendant trilobed blood sign (see Fig. 6b). Other mural sections contain a feathered eye over trilobe (de Young fragment 2A) or eye over stepped rectangle (de Young fragments 1G, 2G, 2D) (Fig. 6c–d). The eye as glyph occurs on the Pyramid of the Plumed Serpent at Xochicalco and in both Cacaxtla murals (Figs. 6e–f, 9a–c, and Vol. Figs. 1–2).

A bone with infixed rectangle occurs on several de Young fragments (2E, 12G, 18F) (Fig. 6g). The Cacaxtla battle scene includes a long bone as name glyph (Fig. 6h). A bead or buttonlike sign is painted in de Young fragment 12G, recalling the button glyph in the Cacaxtla battle scene (Fig. 6i–j).

A great deal more work remains to be done on the topic of Teotihuacan writing before any definitive statements can be made. Admittedly, my hypothesis that the Techinantitla botanical emblems function as locatives is based on circumstantial evidence and analogical reasoning.⁸ Yet the visual evidence from Techinantitla is suggestive. The Teotihuacan fresco painter repeats one emblem, the tree with gnarled roots, with slight but significant variation in botanical details. This use of a repeating element from the natural

world as the constant sign in a toponym recalls the Mixtec place sign convention depicting hills or mountains (Smith 1983: figs. 8.6, 8.8, 8.9). The compounding of various graphemes in building-block fashion to label each tree recalls the structure and process of Aztec glyph formation. I shall suggest in the next section that scribes at Cacaxtla and Xochicalco used similar methods of glyph formation. Thus was an epigraphic tradition of great antiquity handed down to the Aztecs.

Post-Teotihuacan Developments

Phase One of the Second Intermediate period (A.D. 700–900) marked the diminution of Teotihuacan's power and the rise of small, competing city-states, not only in Central Mexico but throughout Mesoamerica. The appearance after A.D. 700 of fortified hilltop sites like Xochicalco and Cacaxtla suggests that, as Teotihuacan declined, an unstable political climate fostered regional competition for political preeminence. The small polities modeled themselves in part on a Teotihuacan system of control of goods and commerce. These successor states announced their ideological importance and their continuance of the great Central Mexican tradition with public programs of monumental relief sculpture (Xochicalco) or mural painting (Cacaxtla) attesting to the legitimacy of their rule. In this public art we see both increased interest in writing and further elaboration of the idea of embedded texts. Both at Cacaxtla and Xochicalco, glyphic information is transmitted within emblematic displays of human figures and attributes of power.

CACAXTLA: TEXT AND IMAGE

The murals discovered a decade ago at the site of Cacaxtla, in southwest Tlaxcala, augment the inventory of early Central Mexican glyphs. In both the battle scene of Building B and the apotheosis scenes of Building A, glyphic signs form an integral part of the pictorial presentation. These murals have been the object of much discussion, focused particularly on issues of artistic and cultural eclecticism.⁹ Only one author has focused on glyphs (Foncerrada de Molina n.d., 1982), although several have remarked briefly upon various aspects of the glyphic emblems (Baddeley 1983: 62–65; Langley 1982; Kubler 1980; McVicker 1985; Robertson 1985).

A scant nineteen glyphs occur in the Cacaxtla murals (Fig. 7a–s). This is clearly an incomplete corpus. Much of the battle scene in Building B is in poor condition. Most glyphs occur in the upper half of the painting, near the faces of the participants; this upper portion is missing from more than half of the mural, especially on the east side (Vol. Figs. 1–2). The portico paintings of Building A are more or less intact, although illegible remnants of other paintings occur on its interior. Recently, new mural borders have been discovered at the southern end of the main plaza (D. Nagao, personal communication, May 1985). Other paintings may yet come to light, causing a reassessment of both writing and painting at Cacaxtla.

⁸Although there is little apparent interest in the dynastic or the individual in Teotihuacan art, one might also hypothesize that these tree glyphs refer to the patronyms of important elite families. Elsewhere in Mesoamerica, the linkage between trees and lineages was widespread.

⁹For a more detailed list of references to Cacaxtla and its murals, see Baird (this volume), Kubler (1980), and McVicker (1985).

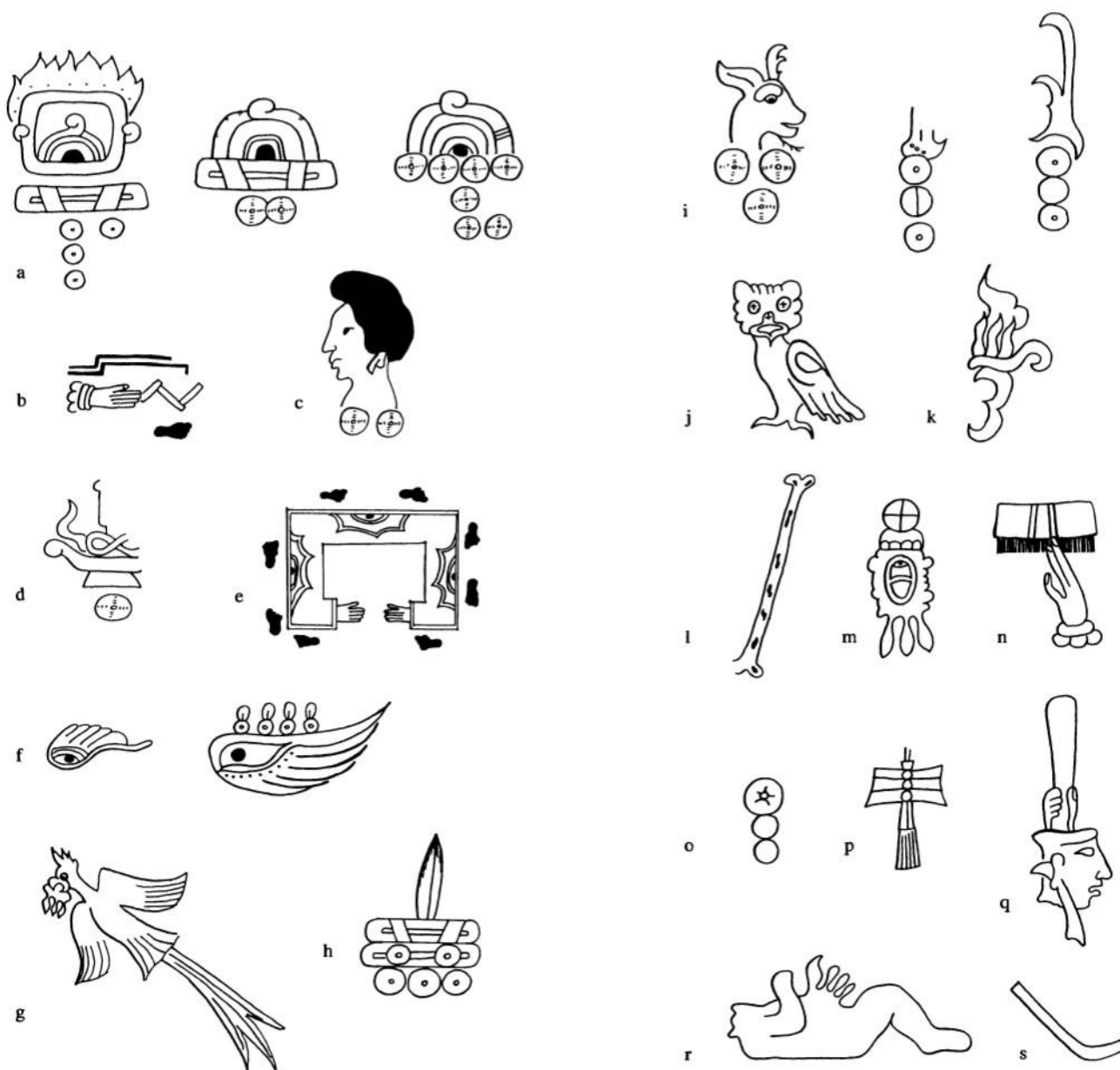


Fig. 7 The glyphic corpus in the Cacaxtla murals.

For the purposes of this essay, I will consider as glyphs only those emblems that have been purposefully separated out from the narrative scene by the Cacaxtla artists. This presents no problem in the apotheosis scenes of Building A. Here, each large, free-floating glyph vies with the pictorial image for attention. In the battle scene, the separation of text from imagery is sometimes difficult to determine. Some glyphs look like spear appendages or face masks. Close inspection of the murals themselves, rather than the line drawings made from them, confirms that these emblems are floating glyphic attributes rather than merely costume paraphernalia.

In some instances emblems perform double duty: they occur as glyphs as well as costume and personal attributes. The blood glyph, for example, (Fig. 7m) occurs seven times alone or as part of a glyphic compound. It appears even more often as a pendant image on belt (Warrior 3),

garter (Warrior 7), or wounded body (Warriors 4, 21). Given the gory subject matter, this ample use of the blood glyph is not surprising.

In other instances glyphlike emblems and attributes are used in clothing and headgear, but are never separated from this context. The trapeze-and-ray headdress emblem is the most striking example (Warriors 3 and 29, Vol. Figs. 1–2). Pectoral masks and some belt emblems may fall into this category as well. The incorporation of glyphlike emblems into clothing is a familiar characteristic throughout Mesoamerica. It occurs in Teotihuacan painting, Oaxacan urns, Maya stelae, and Mixtec gold ornaments, to name but a few examples. Elsewhere I have discussed these as examples of “embedded texts” (Berlo 1983).

Some of the Cacaxtla glyphs are familiar from other places; indeed, they form part of the evidence for Cacaxtla’s eclecticism (Kubler 1980; Foncerrada de Molina 1980).

I will consider each of the nineteen glyphs in turn, although not all require lengthy commentary. My order will follow that of Figure 7, beginning with the glyphs in Building A, followed by those of Building B. In terminology, I have aimed for simple, descriptive nicknames (owl glyph, star enclosure), except in those instances where the meaning has already been pinpointed (blood glyph) or an established name exists in the literature (reptile eye glyph).

The Glyphs of Building A

Reptile eye glyph (Fig. 7a). At Cacaxtla the reptile eye glyph (RE) occurs in the Building A murals three times, in three variant forms. In each instance it is painted blue, yellow, and red. On the north portico, 9RE (the number 9 expressed in bars and dots) is one of at least four glyphs surrounding the central jaguar-man. Here the RE glyph is within a flaming cartouche, as it is on Xochicalco Stela 1 (Fig. 15). Each of the door jambs contains a plainer reptile eye glyph. On the north portico jamb,¹⁰ 7RE (the number 7 expressed with seven dots) floats in space beneath the red-haired figure emerging from a shell.

The RE glyph has been the subject of much speculation. Beyer associated it with the day sign Cipactli, calling it an earth sign (1922). Von Winning analyzed its contexts at Teotihuacan, finding that over 50 percent of its occurrences are in the context of fire, water, or trapeze-and-ray signs. Von Winning, too, sees reptile eye as an earth sign, with connotations of fertility, abundance, prosperity, and creation (1961: 126).

At Teotihuacan the RE glyph occurs most often on pottery vessels. It is rare in mural painting, occurring only at Zacuala, where a bird or butterfly wears it as a pectoral medallion (Kubler 1967: fig. 23), and at Tepantitla where giant red RE medallions are painted on an interior room (Miller 1973: fig. 185–188).¹¹

In Teotihuacan-related arts outside the metropolis, the RE glyph is common on both large and small-scale objects. In Escuintla, Guatemala, it occurs on figural *incensarios* and tripod pottery in conjunction with a female butterfly deity and the trapeze-and-ray sign (see Berlo 1984: 67–69, 111). On the Ixtapaluca plaque, found at Chalco, Mexico, a human figure wears it as a chest ornament. Here it bears a bar and dot coefficient of seven. Stela 1 from Piedra Labrada, Veracruz, combines 7RE with a fire bundle and fourway hatched sign. The Texmilincan Stone in Guerrero features 12RE beneath a trapeze-and-ray sign (Berlo 1984: figs. 69–71).

The presence of a numerical coefficient suggests that the RE sign has a calendrical reference. Langley has found that at Teotihuacan more than two-thirds of the RE glyphs in his sample had variable numbers of dots within the cartouche, suggesting a calendrical function (1986: 145). In its

¹⁰There is some confusion in the literature about directional terminology in regard to these jambs. Here I refer to the “north portico jamb” as that southward-facing portion of the north portico. Similarly, the “south portico jamb” is the northward-facing portion of the south portico. This avoids the more confusing terminology that links the south jamb with the north wall and the north jamb with the south wall.

¹¹It may occur on a Zone 5a mural as a pectoral element on a human figure. See Miller 1973 fig. 138.

sole appearance in Maya territory, the reptile eye glyph occurs beneath the ancestral figures that rise like sprouting plants around the sides of Pacal’s sarcophagus at Palenque (Greene 1967: figs. 18, 24). The reptile eye’s function as an earth locative is supported at Palenque by its conjunction with the Maya Caban sign (r526), an earth sign.

At Cacaxtla the 7RE glyphs standing alone on both portico jambs suggest a nominative function. Nine RE on the north portico, in contrast, is one of four glyphs, although it is the largest and stands alone to the left of the figure. In both form and numerical coefficient it recalls the six repeating 9REs on the north, east, and south sides of the Pyramid of the Plumed Serpent at Xochicalco.

The duality of 7RE on subsidiary figures here versus 9RE on the portico figure recalls Kubler’s remarks on the duality of 7 and 9 head glyph statements found in Classic Maya inscriptions, where he suggests diurnal and nocturnal aspects of rulership (1977: 13). At Cacaxtla the subsidiary jamb glyphs are in watery contexts (basal water band; beneath conch shell figure), whereas the 9RE on the north portico erupts in flames, suggesting a fire and water dichotomy. Considering Cacaxtla’s vivid imagery of warfare and blood sacrifice, one is reminded of the Aztec verbal and visual metaphor for war: *atl-tlachinolli* (“water-fire”).

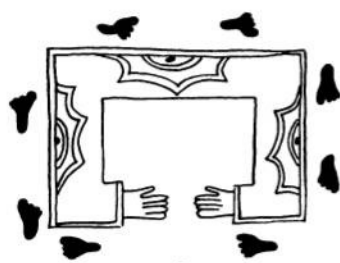
Hand-zigzag-foot compound (Fig. 7b). A badly deteriorated glyph is painted at the top right of the north portico mural. Its surviving details include a hand, a blue and yellow zigzag, a footprint, and a linear framing device at the top. The meaning of this unique compound is unclear. Foncerrada de Molina suggests that this glyph is a variant of the star enclosure glyph on the south portico (n.d.: 12). This seems unlikely, for its surviving details are quite different. It appears to be the only glyph on the north portico to lack a numerical coefficient.

Profile face (Fig. 7c). The jaguar-man on the north portico grasps a wrapped bundle of spears. Directly in front of this is a profile human face glyph with a numerical coefficient of 2. Foncerrada de Molina (n.d.: 13) tentatively related this to Caso’s glyph P, yet this linkage with Zapotec writing seems forced; glyphs with a human face component occur in all Mesoamerican writing systems. They are not necessarily homologous.

Serpent boat (Fig. 7d). The third in the series of mysterious glyphs on the north portico is the compound that I call serpent boat. Within a boatlike enclosure is a partly eroded curvilinear form reminiscent of a figure eight with tails. The symbol atop this is almost completely eroded. The glyph has a numerical coefficient of 1. The closest parallel to this glyph is the side of Tequixtepec Stela 18, in the Ñuñe area (Moser 1977: fig. 36). The left side of that low relief sculpture depicts the number 5 expressed by a horizontal bar. Atop that, the teeth and gum sign familiar from Aztec writing serves as a base for a curved boatlike form from which intertwined snakes rise. This parallel becomes even more suggestive when one considers that the front of the Tequixtepec stone, too, has parallels with this northern area. It depicts the unusual feature of an “animated hand” glyph, like those known from Xochicalco where a hand reaches out of a glyph cartouche to grasp another element

(compare with Fig. 21b). While the Nuiñe writing system is not well studied, it clearly shares many features with the Central Mexican writing system. Nuiñe, in the Mixteca Baja, is a border zone between Mixtec and Nahuatl speakers (Flannery and Marcus 1983: 214). As such, we might expect it to exhibit epigraphic traits from Central Mexico as well as Oaxaca.

Star enclosure (Fig. 7e). The large, rectangular starred enclosure painted directly in front of the bird-man's face on the south portico of Building A is one of the most unusual glyphs at Cacaxtla. Two human hands animate the enclosure, which is open on the bottom. The blue enclosure is ornamented by three stars with eyes. Eight footprints sur-



a



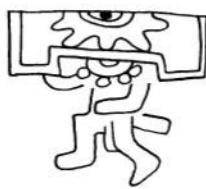
b



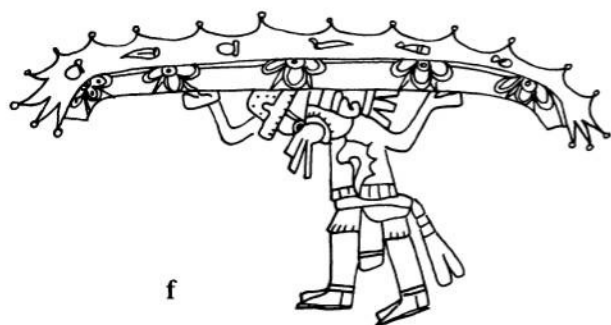
c



d



e



f

Fig. 8 Star enclosures. (a) Cacaxtla Building A; (b) Teotihuacan, Tetitla Portico 1, after Miller 1973: fig. 231; (c) Xochicalco Stela 1; (d) Xochicalco, Pyramid of the Plumed Serpent, west side; (e) Xochicalco, Palace Stone; (f) Vienna Codex, 47b.

round the glyph in clockwise direction; a feathered eye (discussed separately) floats beneath it.

The star enclosure glyph has formal prototypes at Teotihuacan and analogues at Xochicalco (Fig. 8a-e). In Teotihuacan mural art, disembodied hands are sometimes attached to iconic forms (Miller 1973: figs. 128, 316). In two instances these hands form part of an enclosure (Fig. 8b; Emmerich 1984: fig. 13). The Cacaxtla star enclosure also has formal links with Xochicalco. On Stela 1, displayed hands form the base of an enclosure bearing *kam* crosses, other geometric motifs, and a central mouth (Fig. 8c). A similar enclosure, with crosses, wrapped cords, and a blood glyph, occurs in the same textual position on Xochicalco Stela 3 (Fig. 15). On the west side of Xochicalco's Pyramid of the Plumed Serpent, a profile human figure bears a partly eroded geometric enclosure (Fig. 8d). On the Palace Stone a similar figure bears a three-sided enclosure (Fig. 8e). Here the enclosure is labeled with a star. All these images form a series that may be conceptually related to a mythic event depicted in the Vienna Codex. There the culture hero Nine Wind, recently descended from the heavens, bears a star-studded skyband and a waterband on his shoulders (Fig. 8f). This action then reveals specific features of Mixtec topography (Furst 1978: 109-112).

Foncerrada de Molina calls the Cacaxtla star enclosure a toponym of "an aquatic place, maybe a cave close to the sea," claiming that it makes reference to the Gulf Coast/Tabasco region from which the accompanying figure "of Mayoid profile" comes (n.d.: 7-8). Her aquatic designation is based on a reading of the star forms as starfish. While star shapes do occur in aquatic contexts at Teotihuacan, Baird (this volume) demonstrates that at Teotihuacan stars also occur in militaristic contexts and that at Cacaxtla stars may refer to celestial phenomena. Baird links the Cacaxtla battle scenes with a Maya glyphic star event concerning capture, sacrifice, and bloodletting, connected to the planet Venus. I concur with a celestial interpretation for



a



b



c



d

Fig. 9 Winged or feathered eyes. (a) Cacaxtla, south portico of Building A; (b) Cacaxtla, west battle scene of Building B; (c) Xochicalco, Pyramid of the Plumed Serpent; (d) Aztec toponym for Atlixco, Puebla (after Franco 1955: 52).

this toponym. The surrounding footprints may connote travel to this celestial location, perhaps the place where the apotheosis of Cacaxtla warriors occurs. Alternatively, the footprints may be a phonetic element, as they sometimes are in Aztec toponyms.

Winged eye (Figs. 7f, 9a–b). A small blue winged or feathered eye is painted beneath the star enclosure on the south portico of Building A. An upside-down variant of this form, with beaded appendages, floats in front of Warrior 36 on the west battle scene of Building B where it names this warrior. The placement of the name glyph within the apotheosis scene makes clear which specific warrior has been transformed. (As we shall see, there is another name glyph correspondence between the upper and lower murals as well.) An upside-down winged eye glyph occurs on Xochicalco's Pyramid of the Plumed Serpent too (Fig. 9c). Although I believe that a nominative function is most likely for the Cacaxtla winged eye glyph, it is interesting to note that the toponym for Atlixco, Puebla, is an eye with vertical water streams in the position where the Building B winged eye has beaded ornaments (Fig. 9d).

Quetzal (Fig. 7g). To the lower right of the bird-man on the south wall of Building A is painted a realistic quetzal bird grasping a red blood emblem in its beak. The bird is blue with yellow wing coverts.

Thirteen feather (Fig. 7h). Directly beneath the quetzal is a numerical glyph expressed with bars and dots. Foncerrada de Molina suggested that this glyph is 13 *tecpatl*, with the vertical element representing a flint or spear (n.d.: 5). While this is plausible, close examination of the mural reveals that only the tip of this vertical element is blackened, which suggests a feather rather than a flint knife. Like many numerical glyphs at Cacaxtla, the numbers are rendered in a variable pattern of red, yellow, and blue. One bar has trapeziform bindings, while the other has circles. The dots are of variable color. In general at Cacaxtla, as in many codices, this seems to be simply color play on the part of the artist.

Three Deer (Fig. 7i). The south portico jamb figure is identified by the glyphic name Three Deer that floats next to his head. This black-skinned figure with beaded hair grasps the conch shell containing the 7 Reptile Eye figure. In the battle scene, Three Deer appears twice. His name is rendered in abbreviated form both times. Between Warriors 28 and 29 on the west battle scene a deer antler is rendered above three dots. On the east wall in front of Warrior 3, a more fragmentary glyph shows the bottom of an antler or bone above three dots. Warriors 3 and 29 both have trapeze-and-ray headgear, blood glyphs on their belts, and a flint-nosed Tlaloc mouth glyph hovering as a mask in front of the face. These two figures are, in fact, the same person, who then is transmogrified in the Building A fresco cycle. It is clearly of some importance that the artist render this person recognizable by means of his clothing (Building B) and his name glyph (Buildings A and B). While McVicker has suggested that the Three Deer glyph relates to Oaxaca (1985: 85), such southern links need not be forced. Deer is a common nomen throughout Mesoamerica.

The Glyphs of Building B

As I remarked above, only two of the glyphs found in Building A repeat in Building B. Both of these, Three Deer and Winged Eye, appear to be name glyphs, linking the otherworldly figures of Building A with their earthly counterparts in the scene below. Most of the other glyphs in the battle scene are name glyphs as well.

Owl (Fig. 7j). On the east mural, the first standing figure (Warrior 2) is named by a realistic owl glyph painted directly below his downward-looking face. Though the paint surface is very abraded here, yellow beak, red tongue, and blackened wing tips (reminiscent of the feather on the 13 feather glyph) are all apparent. The rendering of this owl is strikingly similar to the painted owls at Tetitla, Teotihuacan (Miller 1973: figs. 281–283).

Flint-nose Tlaloc mouth (Fig. 7k). This glyph occurs twice as a free-floating emblem, in front of the faces of Warriors 3 and 29, whom I have identified as Three Deer. Warrior 3, on the east wall, also wears it on his belt. The glyph consists of three parts: (1) a black eccentric flint over (2) a blue fanged Tlaloc mouth, from which hangs (3) a curl of blood or a long tongue. I have included this in the corpus of Cacaxtla glyphs, although others might see it as a mask. Yet it floats in front of the human faces in a manner that makes its emblematic import clear.

Baird (this volume) discusses some of the correspondences between Cacaxtla and Maya sites of the Pasion drainage. The use of this glyph-mask is one of them. The non-Maya ancestor figures in the skyband of Seibal Stela 3 wear similar Tlaloc masks on (rather than in front of) their faces (Greene, Rands, and Graham 1972: pl. 103). A variant form occurs on Aguateca Stela 2, where it floats in front of the figure's face, as at Cacaxtla (Greene, Rands, and Graham 1972: pl. 86).

Long bone (Fig. 7l). Although most glyphs at Cacaxtla float freely near the faces of the battle participants, several are inserted within the action. Between Warriors 7 and 8 on the east wall, a long femur is painted. It is not attached to any figure, and is painted with dashes of blood. This may name Warrior 7 or 8. A glyphic long bone also appears on Teotenango's "Relief of the Jaguar" (Fig. 23a).

Blood glyph compound (Figs. 7m, 10a). Of all the glyphs at Cacaxtla, this one occurs most frequently and has been the topic of most discussion. Foncerrada de Molina (1982) and Langley (1982) have satisfactorily identified the central image of the compound as the cross section of a human heart, with pendant blood drops. Both authors have traced its genesis to Teotihuacan and noted its occurrence on Xochicalco Stela 3. I shall not repeat that analysis here.

The blood glyph compound consists of three elements in vertical suspension. At the bottom is the bloody heart, which is always painted red, with blue interior detailing. An eye is sometimes painted inside. Above the heart is a blue gum with four teeth, above that, a blue circle scored into four sections by horizontal and vertical lines.

The compound occurs as a glyph four times in the west battle scene and four times in the east one. In two of these instances, the glyphic assemblage occurs in close conjunction

with a warrior's spear (Warriors 30 and 19). In several other instances, its position high on the eroding wall makes its context unclear. Directly in front of Warrior 10, its conjunction with the triple knot and button glyphs is no longer evident in situ; that portion of the wall has eroded, and the text sequence is evident only in line drawings and older slides.

The bloody heart element alone appears as part of Three Deer's belt on both the east and west walls. At least one figure wears bloody heart pendants on his garter (Warrior 7); others wear lobal pendant forms that suggest blood (Warriors 13 and 30). For Individual 31, a blue-painted sacrificial victim, the conventional glyphic form represents his actual heart in the process of being excised, a true conflation of text and image. The blood glyph compound is absent from the apotheosis murals of Building A.

While the bloody heart element has been discussed in detail, the other parts of the compound have been only summarily dealt with. Yet, as I shall demonstrate, they are the elements most noteworthy for our discussion of the development of writing in Central Mexico. Foncerrada de Molina has called the teeth and gum element the "mouth of Tlaloc," characterizing the associated circle as "turquoise or something precious" (1982: 29). Oriana Baddeley has more astutely drawn a connection between the Cacaxtla teeth and gums sign and the later Aztec locative "tlan," from *tlantli*, or teeth, suggesting that this "raises the possibility of both a phonetic reading and the direct Nahuatl cultural connections" (1983: 63). Though Baddeley took this observation no further, a more persuasive connection can be drawn. I believe that, indeed, the Cacaxtla scribes were experimenting with the phonetic toponymy that is so

characteristic of later Central Mexican writing. A parallel construction occurs repeatedly in the glyphs of Xochicalco, where on the frieze of the Pyramid of the Plumed Serpent varying pictorial elements occur over a repeating compound comprised of a mouth with teeth and a quartered circle (Fig. 10b). The mouth with teeth conjoined with a quartered circle at both sites indicates a highly developed conventionalized system for recording place names by this period in Central Mexico. I shall discuss this in greater detail in the section on Xochicalco.

The fact that at Cacaxtla the locative is identified by a blood glyph suggests that the glyphic labels repeatedly identify the location of the scene literally as "place of the bloody hearts," "place of sacrifice," "place of bloodletting," or the like. We have here the Central Mexican version of a Maya emblem glyph emphasized repeatedly in the pictorial narrative.

Stacked rectangle and hand glyph (Fig. 7n). This glyphic compound floats beneath the spear of Warrior 10 on the east wall. It consists of two parts: an unidentifiable rectangular item with fringed base, and a raised hand painted beneath which overlaps the rectangle. Above it is the blood glyph compound just discussed. The meaning of the stacked rectangle and hand compound is unknown; it occurs nowhere else. Baddeley suggests that the rectangular form may be a folded mantle (1983: 63). Glyphic hands have varied meanings in Maya writing. (See, e.g., T361, T666-673, T710-714.) They also occur in Xochicalco texts, as we shall see in the following section. The Cacaxtla hand is reminiscent of phonetic elements in the Aztec glyphic corpus: the arm (*acollī*) used in numerous place names including Acolhuacan and Colima (Fig. 3b-c), or the hand (*mahtl*) used in Matixco and Quetzalmacan (Macazaga 1979: 21, 50, 96, 123). No direct correspondence can be made with these later forms, however.

Two button (Fig. 7o). The blood compound occurs in horizontal sequence with two other glyphs directly in front of Warrior 10 on the east wall. (As mentioned before, this section is now partly eroded, and the glyphic sequence is no longer apparent.) The first glyph I call "two button." It is followed by a triple knot, and then the blood compound. Foncerrada de Molina calls this glyph Two Turquoise (1982: 18), yet the glyph itself is painted red with two blue numerical dots beneath, so turquoise seems unlikely. Langley, quoting von Winning, has noted its resemblance to the Maya glyph T627 (1982: 32). Within the Aztec system, it resembles the toponym for Xico, which is a stylized navel with umbilicus (Macazaga 1979: 178).

Triple knot (Fig. 7p). This is the middle glyph in the three-glyph phrase in front of Warrior 10. It looks like a costume element of knotted cloth or ribbon. In Classic Maya iconography, the triple knot often refers to sacrifice or bloodletting. It may function similarly here.

Trophy head glyph (Fig. 7q). This glyph consists of a profile decapitated head, surmounted by a hand grasping a club. At first glance it looks like part of the action of carnage within the west battle scene. It occurs at thigh level between Warriors 30 and 32. Warrior 31 is seated, tied, and leaning forward. This glyph could easily be read as his

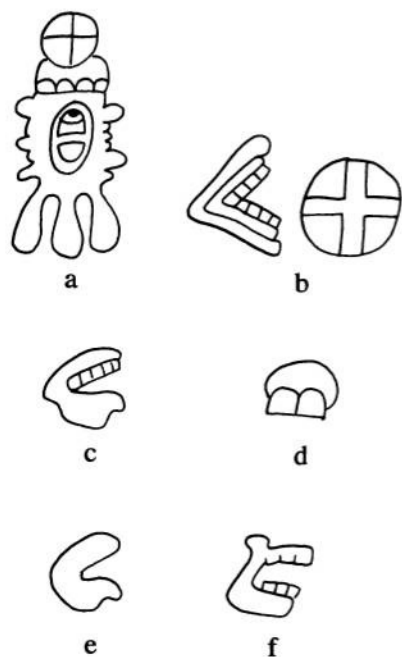


Fig. 10 Locative and phonetic glyphs. (a) "at the place of sacrifice," Cacaxtla; (b) fixed two glyph locative sequence, frieze of the Pyramid of the Plumed Serpent, Xochicalco; (c) Mixtec locative *a*, "at the place of"; (d) Nahuatl locative *-tlan*, "at the place of"; (e) Nahuatl phonetic sign, *tentli*, "lips"; (f) Nahuatl phonetic sign, *cualco*, "to eat."

head, yet his head appears to be hidden by the thighs of Warrior 30. The head glyph is too small to conform to the scale of the narrative scene, and the hand grasping the club is disembodied as well. It does not belong to Warrior 30, both of whose hands are occupied tying up Warrior 31. The trophy head glyph may be either a nominative or action glyph. It is noteworthy that this head wears the distinctive cloth strip pulled through the earlobe that is often seen on depictions of Classic Maya captives (Schele 1984: 21, fig. 11).

Human sacrifice glyph (Fig. 7r). This is yet another glyph inserted into the foray in a manner that makes it difficult to find. Directly in front of the face and above the shield of Warrior 40 on the west wall is a red decapitated human, whose abdomen has been opened for heart excision or ritual disembowelment. Again, this recalls scenes on Maya stelae and vase painting (Schele 1984: Fig. 2). This glyph may be the name of Warrior 40, an adept fighter whose lance strikes the chest of fallen Warrior 39, whose entrails already emerge from his lower abdomen. A supine figure also forms part of a name glyph in the warrior procession in the Lower Temple of the Jaguars at Chichen Itza. There, one figure's name glyph consists of a reclining human on a bar and three dots (Maudslay 1889–1902, 3: pl. 46).

Fending stick (Fig. 7s). Directly in front of Warrior 36, in conjunction with winged eye and the blood compound, is a glyph in simple, curved form, painted blue. This is a weapon, known from other Mesoamerican contexts. It may form part of this individual's name glyph. Considering the numerous correspondences between late ninth-century Seibal, Cacaxtla, and other Mexican sites (see Baird; Kowalski, this volume), it may be noteworthy that on Seibal Stela 17, a non-Maya figure carries just such a fending stick (Graham 1973: fig. 34). Similarly, some non-Maya warriors in Chichen Itza murals carry fending sticks, and several wooden sticks were dredged from the Cenote of Sacrifice there (Coggins and Shane 1984: figs. 20, 24).

Text and Image at Cacaxtla

Because of the fragmentary state of the Cacaxtla murals, it is not possible to make many definitive statements about the use of glyphs there. However, some conclusions can be drawn. In the Building B battle murals, victorious warriors are identified by floating name glyphs. These are usually, though not always, near their faces. Of the twelve complete standing warriors on the well-preserved areas of the mural, nine have name glyphs. The exceptions are Warriors 34, 28, and 37 (although in the deteriorated area in front of the face of no. 37 there is evidence of a numerical dot, suggesting that a glyph would have been painted above.¹²

The interspersal of nominative glyphs in the narrative scene recalls the painted low reliefs in the Lower Temple of the Jaguars at Chichen Itza. The sequence of warriors displayed there in static, processional format is unlike the

physical engagement of the Cacaxtla figures. Yet the same nominal labeling occurs, generally above the head of each figure. Some of the names have numerical coefficients, some do not, just as at Cacaxtla (Maudslay 1889–1902, 3: pls. 45–50).

In the apotheosis scenes of Building A, the glyphs describe a greater range of complex calendrical, mythic, and adjectival qualities than the more narrowly focused nominative and toponymic glyphs of the battle mural. Here we find both the most familiar glyphs (reptile eye) and the most unusual (star enclosure, serpent boat). Only two name glyphs (Winged Eye, Three Deer) link the participants in the apotheosis scenes with the more worldly events below.

Textual information is given greater weight here; glyphs outnumber human figures by 2.5:1. These glyphs float in the pictorial space around the figures; they are not organized into linear sequences like those we shall see on the Xochicalco stelae, for example.¹³ Although we tend to think of linearity as a trait that distinguishes Maya and Zapotec writing from other Mesoamerican systems, even the Maya do not always separate text block from image. They, too, often insert brief captions in a visual scene in a manner analogous to the Building B examples. The Bonampak murals and numerous painted vases demonstrate this (Adams and Aldrich 1980: figs. 1–3). The Maya, too, sometimes float glyphs throughout the pictorial image, as in Cacaxtla's Building A. For example, both Kubler (1980: 169) and Robertson (1985: 5) have remarked on the correspondence between the figural reliefs at Palenque and the Cacaxtla Building A murals. In both, isolated figures on a blank background are surrounded by floating emblems.

Much has been written about the eclectic nature of the Cacaxtla wall paintings. Kubler has characterized them as being “synchronically eclectic” (1980: 171–172). McVicker has called them “Maya narrative illustrations accompanied by highland texts” (1985: 90). Foncerrada de Molina has written of the “Teotihuacan cosmopolitanism” evident in the iconography (1980). She evaluates the glyphic repertoire at Cacaxtla as “epigraphic pluralism”: “los glifos pintados en los muros de Cacaxtla, señalan, en su variedad, la confluencia de sistemas de escritura de distinta procedencia espacio-temporal: Teotihuacan, Monte Alban, Xochicalco, y Tula” (1982: 23). While Cacaxtla does share epigraphic features with many other sites, as I and others before me have shown, I believe that “epigraphic pluralism” suggests a more grab-bag approach to writing than is really the case here.

While the painting style and iconography of the visual narratives do indicate a synthesis of distinct regional styles, the texts are part of a writing system that occurs throughout the Central Highlands. This system grew out of Teotihuacan's experimentations in writing. The system

¹²I have not included Individuals 32 and 6, the standing lords of the defeated warriors. For the other figures, the glyphic designations are as follows: 40: human sacrifice; 36: winged eye; 30: trophy head; 29: three deer; 2: owl; 3: three deer; 7: long bone; 9: stacked rectangle/hand; 10: two button.

¹³The only apparent sequences of glyphs occur in the battle scene. On either side of Warrior 10, there is a blood glyph/stacked rectangle/hand sequence on the left and two button/triple knot/blood glyph clusters on the right. In front of Warrior 36 there is a winged eye/fending stick/blood glyph sequence.

was flexible and, as we shall see, varied slightly from site to site. But the First Intermediate period was a time in which the basic features of writing were widely shared and were presumably well understood by an elite audience. This is the era that Prem has characterized as “the Central Mexican Writing Horizon” (1973: 52).

During this era some aspects of the system were flexible, such as the use of bars versus dots in numeration. I do not agree with McVicker that the use of bars and dots as well as dot-only numbers necessarily denotes a deliberate notational redundancy, using two systems to assure that the message be understood (1985: 90–91). The flexible use of bars versus dots occurs at Teotihuacan, Xochicalco, and Teotenango as well.¹⁴ It may be that both were acceptable, and only later did the system become more standardized. One thinks here of the Maya scribe’s freedom in calendrical numeration: bars, dots, head variants, full-figure glyphs all refer to the same calendrical concepts. The Aztecs generally used dots, yet even they occasionally accommodated both systems, as in the three-tenoned *xiuhcoatl* sculptures that depict bar and dot numeration (see Umberger n.d.: 219–220, fig. 66).

Cacaxtla’s elite may well have stressed their ethnic emergence from Maya-related Olmeca-Xicalanca of the Gulf Coast by means of a Maya style cycle of mural paintings depicting ritual warfare and subsequent transcendence, as some have suggested (McVicker 1985). Yet their deliberate use of only Central Mexican glyphs indicates that they intended to communicate to their local audience not only the exotic style of the spectacularly conceived murals but also the unquestionably local message of the inscriptions.

XOCHICALCO: TEXT AS IMAGE

A fortified hilltop site in western Morelos, Xochicalco has been known since the Early Colonial period. It is a key site for the study of ancient Central Mexican writing; some dozen stone monuments preserve a corpus of inscriptions larger than that of any other Central Mexican site of its era.

In examining writing at Xochicalco, I shall not examine every glyph as exhaustively as in the previous section on Cacaxtla. Xochicalco’s monuments are more familiar to scholars, and many have been published repeatedly. I shall focus on the imagery of the Pyramid of the Plumed Serpent, the three stelae, and the Palace Stone. My inquiry will concern the possibility of historical data on these monuments and their concordance with epigraphic principles known from other Mesoamerican writing systems. I shall not engage in detailed analysis of calendrical issues. Little can be stated definitively about the calendar at Xochicalco without a great deal more textual evidence. I cite below the major works on Xochicalco’s calendrical glyphs.

¹⁴See, for example, the date 11 Monkey on the west side of the Pyramid of the Plumed Serpent (Fig. 21b) and the Relief of the Jaguar at Teotenango (Fig. 23a). For Teotihuacan, see Langley 1986: 139–171. See also Thompson’s remarks on the use of both systems on other non-Maya monuments in Mesoamerica (1941: 17–21).

Previous Studies

The colonial friar-ethnographer Sahagún was the first westerner to mention the ancient site of Xochicalco.¹⁵ As one of the best-known sites in Mexico, it has been the object of numerous studies since that time. Saville (1928) and Litvak King (1971) have covered the history of excavation there.¹⁶ I will examine only those studies that have considered writing and calendrics.

The latter half of the nineteenth century was a time of avid interest in Pre-Columbian epigraphy.¹⁷ The publication of Kingsborough’s ambitious nine-volume *Antiquities of Mexico* (1831–48) made vast amounts of codex material available for scrutiny. Concurrently, numerous publications on sites and major monuments allowed scholars to begin broad comparative studies. Early writers on Xochicalco mentioned not only the obviously calendrical inscriptions on the Pyramid of the Plumed Serpent but also the seated figures and associated symbols on the frieze and second story (Fig. 11). To some it was clear that these were glyphic in intent. Orozco y Berra, writing on Xochicalco in 1880, was the first to suggest that the pyramid presented historical data. Working from earlier drawings and descriptions, Orozco y Berra observed that “the reliefs of the frieze appear to refer to a dynasty or a series of kings or lords with their hieroglyphic names” (1960, 2: 310). He saw no connection with later Central Mexican writing but remarked upon the possible relationship of the imagery to the sculptures of Monte Alban (1960, 2: 311).

Seler discussed the calendrical glyphs in more detail in his 1888 article “Die Ruinen von Xochicalco” (reprinted 1904). Though offering no innovative theories, Seler demonstrated his customary attention to precise descriptive detail in identifying the glyphs and scenes on the Pyramid of the Plumed Serpent. In discussing the “Seler Stone” (a fragmentary stela found on a ridge road leading out from Xochicalco to the southeast, which Peñafiel named for its discoverer), Seler pointed out that some graphic elements suggest a relationship to Zapotec and Mixtec reliefs (1904: 154). Unlike Orozco y Berra, however, Seler firmly placed the calendrical glyphs within the Central Mexican tradition, despite the fact that bars and dots, rather than dots alone, occur in the numeration system: “We find the same curious numerical representation on other monuments of neighboring regions, and there is not the slightest ground for assuming therefore a Maya influence there and everywhere” (1904: 159). Seler suggests that the Tlaluica, a local Nahua group discussed in sixteenth-century sources, were the builders of Xochicalco, though he hazarded no guess about its date.

Peñafiel is best known for his careful line drawings and photos of the Pyramid of the Plumed Serpent, which he published in 1890. His text adds little to Seler’s discussion of glyphs, with one exception. Peñafiel was the first to

¹⁵“There are large vestiges of the antiquities of this people as they nowadays appear in Tula, Tollantzinco, and a structure called Xochicalco, which is near Quauhnauc” (Sahagún 1950–82, bk. 1: 48).

¹⁶For a partial update on work since 1971, see Hirth 1984.

¹⁷For further discussion and bibliography on the advances of this era, see Berlo 1986.

understand the function (in general terms) of the unusual glyphic sequence on the north portion of the west side of the pyramid.

There is the sign *calli* placed over a *tlalpilli* or headband with the numeral 5 under it. There is here the very expressive manner of representing the joining together of a date: it is as though a person, placed behind the sign *calli*, house, with his right hand open over the numeral 1, joins one date with another by means of his left hand, which takes a band or ligature from the sign *XI ozomatli*, which belongs to the following *Ce Acatl*. (1890: 43)

Adela Breton (1906) made some corrections to Peñafiel's drawings and mentioned in passing the use of rebus-writing on the pyramid.

A half century later there was a surge of new interest in Xochicalco. Marquina (1951: 134–143) published new drawings of the Pyramid of the Plumed Serpent, including some reconstructions. Unfortunately these are extremely small-scale, as well as inaccurate in many details. The 1960s witnessed the publication of results of Mexican excavations at Xochicalco. Numerous new monuments, including the three stelae, and other monoliths were discovered and analyzed (Sáenz 1962, 1968). Details of these analyses will be mentioned in my discussion of individual monuments.

Most of the literature on Xochicalco's glyphs has focused on calendrical matters. In 1962 Alfonso Caso examined Xochicalco's glyphs, focusing principally on calendrical signs (reprinted in 1967: 166–186). His comparative approach, studying the signs in relation to the Aztec and Zapotec calendars, elucidated the many overlaps between the systems. Sáenz, who excavated at Xochicalco, believed that epigraphic and iconographic evidence suggested that the first New Fire Ceremony took place at Xochicalco and that the Central Mexican calendar was regularized there (1967).

The two most recent offerings on calendrical matters are by Hanns Prem (1974) and David Kelley (1983). Prem, looking for significant temporal relationships among the dates on the Pyramid of the Plumed Serpent, sees deliberate 28-day cycles, the function of which are unclear. Like others before him (Nicholson 1966), Prem sees the looped-cord dates on the west side of the pyramid as a calendar correlation of different methods of time reckoning. Prem suggests that these methods may involve just one day's discrepancy (1974: 360). Kelley, in a complex discursion within a study of the Maya correlation problem, posits that the Pyramid of the Plumed Serpent and other monuments at Xochicalco all exhibit calendrical changes associated with the calendar reform that Kelley dates to A.D. 934 (1983: 172).

Less attention has been paid to noncalendrical epigraphy. Carmen Cook de Leonard (1959) was the first to suggest that Xochicalco's glyphs might correlate with place names in the Mexican manuscripts. I shall discuss her work in more detail shortly. More recently, Esther Pasztory analyzed the three Xochicalco stelae, focusing on iconographic features shared among many Middle Classic cultures (1973).

Contexts of Inscriptions

Carvings on stone monuments provide the only evidence for writing at Xochicalco. As Hirth has observed, many of the site's major monuments were discovered within the restricted space of the Ceremonial Plaza, a walled patio group that served as Xochicalco's most exclusive precinct (1984: 582).¹⁸

Stone monuments with glyphic inscriptions range from small, portable ones, such as the Stone of the Four Glyphs, which is 50 cm on a side (Noguera 1961: 34), to the imposing Pyramid of the Plumed Serpent, which is 21 m on a side. Three finely carved stelae, one large monolith (the Stela of the Two Glyphs), two fragmentary stelae (the Seler Stone and Thirteen Reed Stone), one larger boulder (the New Fire Stone), and the Palace Stone (approx. 50 cm on a side) complete the inventory. Complex texts appear on only six monuments (Pyramid of the Plumed Serpent, Stelae 1, 2, and 3, the Palace Stone, and the Seler Stone); the other five have four or fewer glyphs.

Of the complex texts, the three fine stelae best preserve the coherence of the original text as presented by the Xochicalco scribe. All three are remarkably well preserved, with few damaged glyphs in their sixteen-glyph sequences. The Pyramid of the Plumed Serpent, while recording more data than the three stelae, is not as well preserved. I shall consider its glyphic message first.

The Pyramid of the Plumed Serpent (Fig. 11)

Although many travelers recorded their impressions of Xochicalco during the eighteenth and nineteenth centuries (see Saville 1928), not until the joint expedition of Peñafiel and Seler in 1887 was the Pyramid of the Plumed Serpent accurately measured, photographed, and drawn. Although Xochicalco is a popular and often photographed site, incredibly, Peñafiel's drawings (1890: pls. 180–196) remain the only complete publication of the figural and glyphic reliefs on the pyramid.¹⁹

Peñafiel's photographs reveal that, although the dramatic feathered serpent reliefs on all four sides of the bottom-level *talud* were mostly intact at the end of the nineteenth century, those on the *tablero* frieze above the *talud* of the second level were fragmentary even then. (Perdreauville, an early visitor to the site, reported that in 1754 many carved facing stones on the pyramid were plundered to build ovens on local sugar cane plantations [Saville 1928: 195]). Nowhere does the second level retain its full height. On the west side (the front of the structure), the frieze is preserved in part, although most of the figures' heads and some glyphs are missing. The second story is best preserved on the west side, including the walls that would have led into the chamber. On the south side the

¹⁸In addition to the Pyramid of the Plumed Serpent, with its relief-carved figural and glyphic facades, the three stelae and the Stone of the Four Glyphs were also found within this precinct. See Noguera (1961) for details of the discovery of the Stone of the Four Glyphs, and Sáenz (1962) for discussion of the depositional context of the three stelae.

¹⁹As mentioned before, Marquina's small-scale reconstruction drawings present many inaccuracies in the detail and placement of the reliefs on the frieze and second level (1951: 134–143).



Fig. 11 Pyramid of the Plumed Serpent, Xochicalco.

frieze is entirely missing, while the second story is only minimally preserved. Only the lowest stones of the figural reliefs and a few fragmentary glyphs remain. On the east side, approximately three-quarters of the frieze is preserved, while none of the second story remains. On the north side, the frieze is almost totally intact, except for a few of the topmost stones of one section. The second story on the north is extremely fragmentary.

Despite the fragmentary state of the monument, enough is left to reconstruct the general “message” of this important edifice. Using multivalent references, it encodes and affirms the religious, intellectual, and political ideology of its makers. The sloping base, one of the most familiar images in Mesoamerican art, unites mythic, political, and temporal realms. Undulating feathered serpents enframe seated rulers as well as glyphs concerning fire ceremonies and calendrical regulation. Rulership is here grounded in the movement of time and of cosmic serpents. The *tablero* frieze above consists of repeating seated figures linked with changing, glyphlike emblems. Particularly noteworthy is the repeated use of an open mouth and quartered circle topped by variant emblems (Fig. 13), a motif to which I shall return momentarily. The extremely fragmentary second-level *talud* continues the emblematic imagery but in less static format. It also restates some calendrical information from the bottom level (Fig. 11).

Examining the emblems and figures on the frieze and second-story *talud*, I hypothesized that, in accordance with principles revealed at Maya and Zapotec sites (Marcus 1976a, 1980; Berlin 1958), we might expect to find specifics of polity, history, and geography revealed in public monumental art. The changing emblems linked to repeating human figures seemed a likely place to find such references.

Since Orozco y Berra’s remarks in 1880 on the historical content of the pyramid’s inscriptions, few scholars have commented further on this matter. Nicholson (1969: 40; 1973: 33) remarked in passing on the possible political or dynastic content of the noncalendrical glyphs, but Carmen Cook de Leonard is the only scholar to have attempted identification of the Xochicalco glyphs as specific topo-



a



b



c

Fig. 12 (a) toponym on southeast corner of the second story of the Pyramid of the Plumed Serpent, Xochicalco; (b) Ahuilizapan toponym, Matrícula de Tributos; (c) Tlamacazapa toponym, Matrícula de Tributos.

nymys. In 1959 she suggested that the stone on the southeast corner of the second story was the Aztec glyph for Ahuilizapan (modern-day Orizaba in Veracruz) (1959: 135) (Fig. 12).²⁰ While she gives no supporting evidence, she

²⁰Seler reported that this stone was found lying on the ground at the southeast corner of the structure (1904: 150). It has since been reset at the southeast corner of the second story. This has to be its correct placement, for it is a sloping corner piece with two carved sides. Because of its characteristic talus slope, it could not form part of the frieze, for example.

uses this identification to argue that the frieze on the Pyramid depicts a congress of astronomers, with delegates from as far away as Veracruz! Examination of the Ahuilizapan glyph in the *Matrícula de Tributos* (13v) indicates that the form is quite different from that depicted at Xochicalco (Fig. 12a–b). In the manuscript the top half of a human figure with raised arms is depicted within a water canal, while at Xochicalco it is simply a human head over a canal.

Closer to Xochicalco I have found a much more convincing parallel. In the *Matrícula de Tributos* (8v), the pueblo of Tlamacazapa is identified by a glyph of a water canal surmounted by a profile human head with earring.²¹ The form of this sixteenth-century glyph mirrors that carved on the Xochicalco pyramid approximately seven centuries earlier (Fig. 12c). Furthermore, Tlamacazapa, near Taxco, Guerrero, is roughly 40 km southwest of Xochicalco. It is clearly within the socioeconomic sphere of influence that Hirth has described for Xochicalco, consisting of western Morelos and eastern Guerrero (Hirth 1984: 581).

This example of more than five hundred years of place name and hieroglyphic continuity in Central Mexico should not be surprising, given similar evidence accumulating for the Maya, Zapotec, and Mixtec areas.²² It suggests that some of the basic features that we associate with Aztec writing were in use long before the Aztecs came to power in Central Mexico. Place names themselves, as well as their glyphic emblems, may have long temporal continuity, suggesting a great time depth for the Nahuatl language in this region.

On the frieze of the pyramid at least ten glyphic compounds combine a changing pictorial element above, with a fixed two-glyph sequence of open jaw and quartered circle below (see Fig. 13; Peñafiel 1890: pls. 189–191). Every seated human figure on the north and west frieze is linked to such a compound. On the east frieze, most of the figures are linked to glyphic compounds consisting of a changing glyph with numerical coefficient on the bottom and a changing pictorial element on top (Fig. 14). Like the feathered serpents on the *talud* below, all these seated figures commence from the center of the east side of the pyramid and proceed in processional fashion around to the west, or front, side. (Thus, on the east side, half are facing north and half are facing south.)

The signs that join a changing upper element with a repeating lower element of mouth and quartered circle most likely are place signs. At least one includes the canal (Nahuatl: *apantli*) often used in Nahuatl locales (Fig. 13c). The others include animals, actions, and compound glyphs (Fig. 13a–f). Hirth (this volume) has suggested possible Nahuatl names for some of these glyphs, based on their imagery. It remains to be seen whether these can be identified with specific places that have some plausible connection with Xochicalco.

I believe that the jaw and circle motif is a pictorial (and perhaps phonetic) locative indicator. Its use is not confined

²¹For the etymological derivation of the name Tlamacazapa, see Macazaga 1979: 161.

²²For example, Marcus has demonstrated much longer place name continuity in the Valley of Oaxaca (1980: 59).

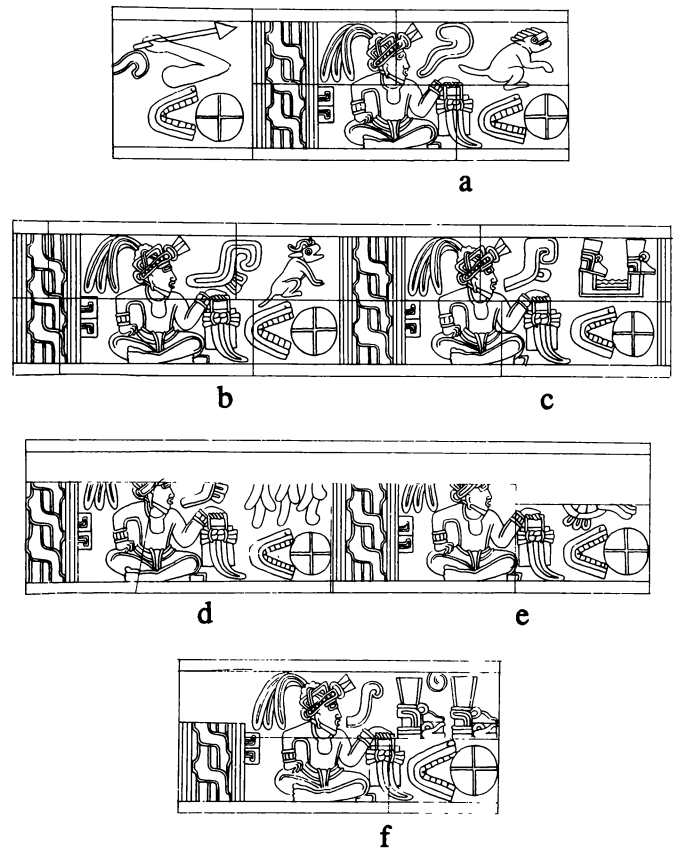


Fig. 13 Possible toponyms, frieze of the Pyramid of the Plumed Serpent, Xochicalco (after Peñafiel 1890: pl. 190).

to Xochicalco; we saw the use of a teeth and gums sign and quartered circle at Cacaxtla as well (Fig. 10a). In Mixtec writing, a profile jaw like the one used at Xochicalco represents the locative prefix “a-,” meaning “at the place of.” It is used particularly for place signs in the Nochixtlan Valley (Smith n.d.: 252). In Aztec writing, human and animal mouths form phonetic elements of words (Fig. 10d–f).

The panoramic visual display on the Pyramid of the Plumed Serpent frieze—the place signs accompanied by elite figures—recalls the Aztec Tizoc Stone, on which glyphs of conquered territories are paired with images of their rulers and deities (Wicke 1976). On the Xochicalco pyramid, however, the accompanying figures are not individualized the way they are on the later Tizoc Stone. Instead, each wears the trapeze-and-ray headdress and carries a strap bag. The trapeze-and-ray headdress is a Teotihuacan-derived emblem, widely used in militaristic contexts throughout Mesoamerica (Berlo n.d.). Here it may refer to the military class needed to regulate conquest and tribute.

Hirth (this volume) suggests that the visual depiction of a mouth about to swallow a quartered circle puns on the Nahuatl verb “to pay tribute” and that the signs enumerate Xochicalco’s tribute towns. While his explanation of the mouth and quartered circle differs from mine, the two explanations are by no means mutually exclusive. Multival-

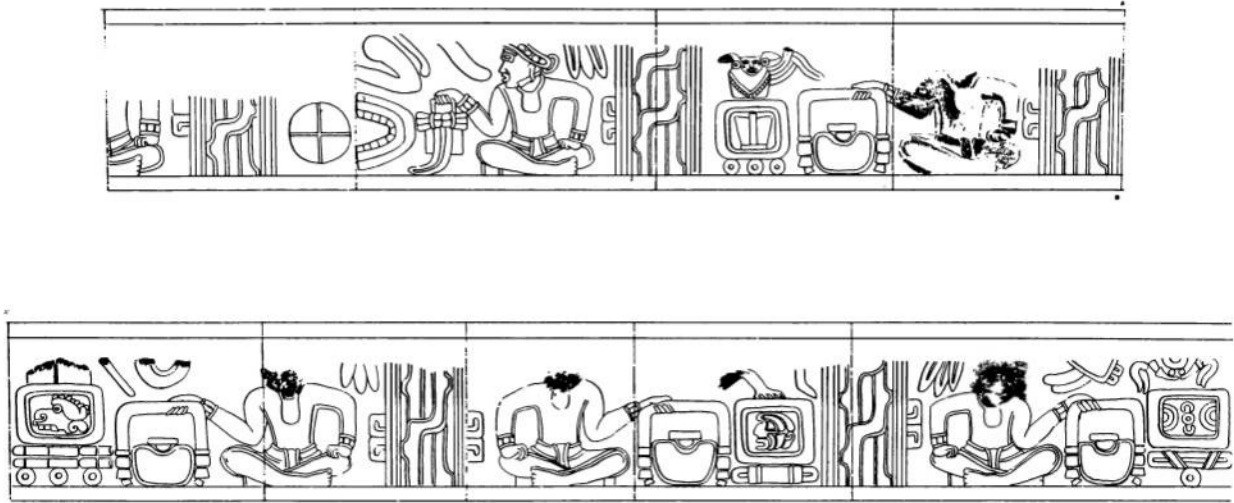


Fig. 14 East frieze, Pyramid of the Plumed Serpent, Xochicalco (Peñafiel 1890: pl. 189).

ent symbols are certainly common in Maya writing, where layered nuances of meaning suggest scribal virtuosity (Berlo 1976). If Hirth's suggestion is accurate, it illustrates the principle of metonymy often seen in Aztec writing. A metonym is a word (or, in this case, an image) that stands for something larger and often more abstract than itself. In the United States we say "the White House" when referring to the concept of the presidency. In Aztec pictographs a burning temple is a metonym for conquest. So, too, the glyph for "swallowing something precious" is a plausible metonym for the extracting of tribute, as Hirth suggests.

Having compared the other glyphs on the structure to known colonial place names in Morelos, Guerrero, Tlaxcala, and Puebla (see Gerhard 1972; Franco 1955; Anaya Monroy 1965), I have been unable to make any other correspondences that are as direct a fit as the Tlamacazapan example, which I believe is incontrovertible. Despite the possibility of great longevity in both place name and place sign, there is also the distinct possibility of marked change over time. Identifying indigenous place names and positing their continuity backward in time is an endeavor fraught with great difficulty. The hazards of this have been discussed thoroughly by Whittaker (n.d.: 56–85), who covers place name borrowing, discrepancies between name and sign, and glyphic variation. See also Brand (1948: 241–243), Dyckerhoff (1984), and Gerhard (1972: 35) for briefer remarks on post-Colonial place name changes.

The Stelae Triad (Fig. 15)

Xochicalco's three columnar, four-sided stelae were discovered by Sáenz in 1961, ritually buried in a pit in Structure A (Sáenz 1962). These three monuments preserve the longest linear inscriptions of the pre-Aztec era in Central Mexico. They have never been fully deciphered. Sáenz identified individual calendrical glyphs, suggested the existence of toponyms, and related the imagery to Teotihuacan, Monte Alban, and the Gulf Coast (1962). Casa, too, discussed the links between these inscriptions and the Aztec calendar (1967: 166–186). Pasztory has analyzed the stelae imagery as

a deity triad of sun god, rain god, and earth goddess, with associated glyphs pertaining to sacrifice and agricultural fertility (1973). She further linked this triad with Middle Classic imagery at Palenque, El Tajin, and Bilbao. Her analysis was iconographic rather than epigraphic; she did not attempt a methodical textual decipherment.

My own extensive analysis of both the numerical/calendrical data as well as the other glyphs has yielded few results. I shall suggest that at least two more identifiable places are named on these monuments. Other possibilities remain inconclusive.

It has been customary to assume that the footprints on the stelae illustrate directionality of reading (i.e., front, down the right side, up the back, down the left side). Yet in some instances the footprints occur more than once on a side, while they may be omitted on another face of the stela (Stela 1). Experimenting both with the direction of footprints as well as with alternate schemes of directionality, I was able to deduce only the most limited pattern of meaning on the monuments.

Each stela has sixteen glyphs. The pattern of textual expression is similar but not identical on each monument.²³ In each case the front presents three large glyph blocks: a calendrical glyph, followed by a human or deity visage, followed by a compound emblem. All nine are images or sign compounds that are familiar from elsewhere. All have been thoroughly and convincingly identified by Pasztory (1973). I will add only the observation that the bottom glyph on the front of Stela 1 bears some resemblance to the Cacaxtla star enclosure glyph (Fig. 8a, c). On the south portico of Cacaxtla Building A, the star enclosure glyph occurs in association with the reptile eye too.

While the front of each stela presents a unified icono-

²³Stelae 1 and 3 have the same number of glyphs on each side: 3–6–3–4. Stela 2 has 3–4–4–5. Another link between Stelae 1 and 3 occurs in the bottom-most glyph on the backs of these stelae: the dates 9 Rabbit and 10 Reed are consecutive years. Nine Flint, in the corresponding position on Stela 2, is twenty-six years earlier in the Calendar Round. See Pasztory (1973) for iconographic links that suggest that Stelae 1 and 3 are a pair.

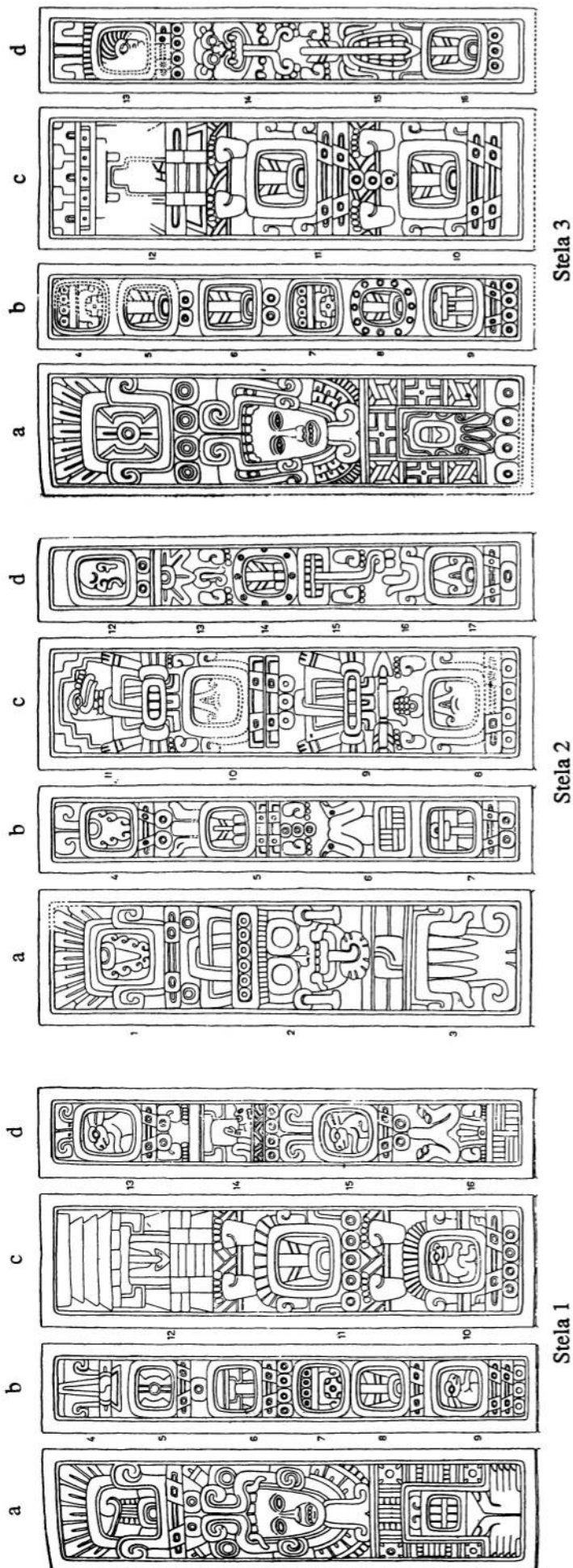


Fig. 15 Xochicalco stelae triad (after Sáenz 1961, pls. 2-4).

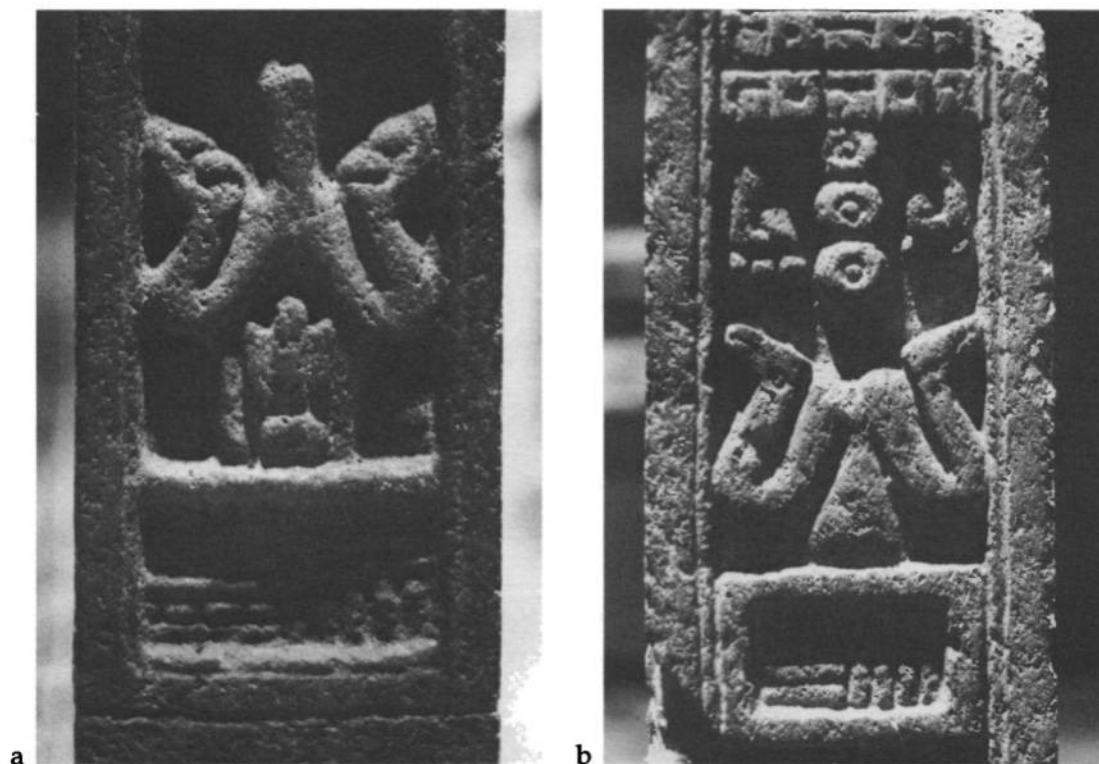


Fig. 16 Xochicalco glyphs demonstrating principles of Aztec glyphic structure. (a) Stela 1, (b) Stela 2.

graphic message, the sides and back are less clear. Three-quarters of the glyphs have numerical coefficients. Bars and dots are used almost exclusively, except on the back of Stela 1 where one Five Reed date is composed solely of dots. The glyphs with numerical qualifiers are of four types: (1) numbers infixed (occurs three times as one glyph: within a cartouche, a bar and four dots are infixed over a volute and St. Andrew's cross); (2) plain glyph cartouche with numbers below; (3) glyph cartouche with exterior volutes (occurs only on the large-scale glyphs on the fronts and backs of the stelae); (4) dot numerals placed on the cartouche ring (occurs in only two instances: Stela 2, side D and Stela 3, side B.²⁴

It is not clear how all these glyphs with numerical coefficients should be construed. It is highly unlikely that all are meant as dates. Several are symbols with no apparent equivalent in the calendrical system (i.e., Stela 1D: 4 "man on mat"; Stela 3A: 4 blood glyph/skyband). Some of these could be names of individuals, yet one would expect fewer names and more repetition of those names.

The majority of dates are year-bearer dates (Reed/Flint/House/Rabbit). Reed glyphs are the most common, occurring ten times on these three stelae. They are, in general, the most common date glyphs inscribed at Xochicalco. This is true in Aztec inscriptions on stone too (see Umberger n.d.: 54–55). No consistent pattern that might suggest ritual or historic cycles is apparent in these dates. Of

the noncalendrical glyphs, only a few appear to demonstrate principles of Aztec glyph formation. For example, glyphs on Stelae 1 and 2 each depict a four-way crosshatch sign for earth with other elements above (Fig. 16a–b). In one case the posterior and legs of a figure seem to dive into the earth. In the other, the clawed legs and tail of an animal are above; human feet and the top of a reed arrow rest on the crosshatched earth. These elements recall the phonetic and pictographic components of Aztec names (Fig. 1).

Like the signs on the Pyramid of the Plumed Serpent, several glyphs on the stela triad provide links between Xochicalco and nearby towns whose names are known from later times. The topmost glyph on the back of Stela 2 consists of a bird head infixed within a stepped enclosure (Fig. 17a). This is a Zapotec style place sign indicator, known from Monte Alban and elsewhere in the Valley of Oaxaca (see Marcus 1980). A stylized hill, its function is similar to the Nahuatl pictographic locatives *-tlan* or *-tzinco*. The same locative and bird head occur on the "Thirteen Reed Stone" too (Fig. 17b). Sáenz recognized both of these as possible locatives, calling the image on the Thirteen Reed stone a turkey, and the other a turkey or king vulture (1968: 190; 1962: 75). I believe that in both instances a king vulture (*sarcohampus papa*) is represented.

The ocellated turkey (*agriocharis ocellata*) has reddish wartlike protrusions on top of its head, whereas the king vulture has a large pronounced wattle above its nostrils, as well as the distinctive down-curving beak of a raptorial bird. The Xochicalco artist has accentuated each of these features in both stone sculptures. The Nahuatl word for

²⁴Are we to read this as 8 Reed and 12 Reed? In the Tira de Tepechpan the coefficients of calendrical dates are often depicted as dots on the glyph cartouche.

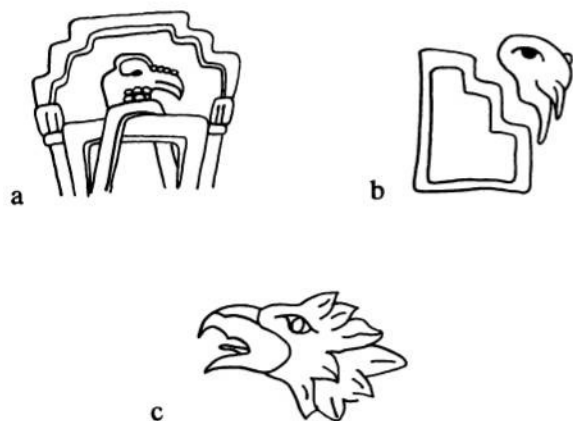


Fig. 17 Vulture or eagle toponyms. (a) Stela 2, Xochicalco; (b) Thirteen Reed Stone, Xochicalco; (c) Cuautla toponym, Matrícula de Tributos.

king vulture is *cozcacuauhtli* (*cozcatl*, collared, added to *cuauhtli*, raptorial bird). While Cozcacuautenango, a town in Veracruz, is mentioned in both the Codex Mendoza and the Lienzos de Tuxpan, there is no such place within the Xochicalco sphere of influence. However, if we consider the general term for raptorial bird, *cuauhtli*, rather than the more specific one, the town of Cuautla, in Morelos, fits the bill. Cuautla is about 32 km east of Xochicalco.²⁵ In the Matrícula de Tributos (4r) its toponym is simply a profile eagle head with pronounced down-curving beak (Fig. 17c).

On the Thirteen Reed Stone, the king vulture toponym is linked to the date 13 Reed. Below these two signs is a temple roof. The stela is broken below that (Fig. 18). On Stela 2, below the king vulture is a year sign with a date that has a coefficient of thirteen beneath it. Erosion of the glyph cartouche makes it impossible to see what the sign is. Sáenz, in his drawings, reconstructs it as 13 Flint. The thirteen coefficient and its linkage with the king vulture place glyph makes it tempting to conjecture that this date may have been Thirteen Reed as well. Thirteen Reed was an auspicious date for the Aztecs (see Sahagún 1950–82, bk. 4: 2). It may have been for the inhabitants of Xochicalco as well, for it is commemorated on Stelae 2 and 3, on the Thirteen Reed Stone, and on the south side of level 2 of the Pyramid of the Plumed Serpent where it

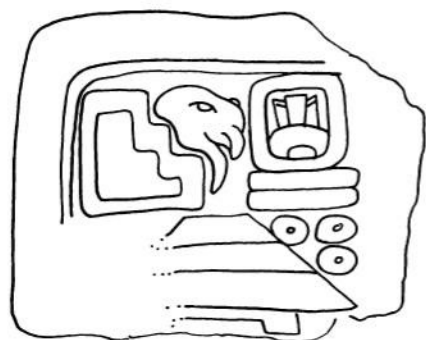


Fig. 18 Thirteen Reed Stone, Xochicalco (after Sáenz 1968: fig. 7).

appears in variant form as one bar and eight dots (see Peñafiel 1890: pl. 192).

On Stelae 1 and 3, temple signs occupy the same relative position as the glyph on Stela 2 that I have suggested is a toponym for Cuautla (Fig. 19a–b). Each temple is slightly different. On Stela 1, a vertical arrow is lodged within the doorway of the temple. On Stela 3, crenellated roof ornaments are featured. On both, footprints on a petate mat are at the base of the glyph. It is likely that these two temple glyphs, with their architectural individuation, are place signs too.

The arrow in the doorway of the Stela 1 temple glyph presents a clue to the specific toponymic reference. In fact, each of the three stelae inscriptions contains a noncalendrical glyph that includes an arrow as the central part of the image (Fig. 19a, c, d). On the back of Stela 2, a horizontal arrow, ear of corn, and footprints conjoin with a trapeze-and-ray sign to form a glyph block. On the left side of Stela 3, a variant of the corn-arrow-footprint configuration occurs.

Eight km southwest of Xochicalco lies the town of Miacatlan, whose name means “Place of the Reed Arrows” (*mitl*, arrow; *acatl*, reed), and whose glyph occurs in the Matrícula de Tributos (3v) (Fig. 19e). Litvak King (1972) has hypothesized that Miacatlan replaced Xochicalco as the dominant polity in this region after A.D. 900. It is logical to expect that, prior to this political upheaval, Miacatlan would be featured in Xochicalco’s public narratives.

A rectangular stair block recently discovered on a habitation terrace at Xochicalco also conjoins the glyphic emblems of architectural profile and arrow (Fig. 19f). Set in a stairway of plain dressed blocks, both riser and tread of the block are carved in the same design: at the top, a hand grasping an arrow; below, an architectural platform with a numerical coefficient of three. Further archaeological and epigraphic research is needed to test my hypothesis that the glyphs refer to the nearby emergent center of Miacatlan.

While the three Xochicalco stelae may depict a deity triad, as Pasztory has suggested (1973), it is also plausible to try to read them as historical monuments commemorating rulers, reigns, and conquests. On Maya stelae, rulers sometimes wear the guises of gods rather than appearing in purely human form; the same may be true here. The possible existence of toponyms on the monuments reinforces this historical interpretation.

The Palace Stone (Fig. 20a)²⁶

H. B. Nicholson has observed that this monument resembles a page from a pictorial manuscript (1969: 40). Indeed, in its layout and pictographic conventions it recalls Mixtec pictorials in particular. The imagery combines numerical glyphs within cartouches with narrative imagery that presents an embedded text. Place signs are denoted by

²⁵In the Matrícula, Cuautla (or Quauhtlan) is included in the tributary province of Huaxtepec (today Oaxtepec), east of Cuernavaca. Tlamacazapa is included in the tributary province of Taxco.

²⁶This monument is referred to by Seler (1904), Caso (1967), and others as the “Piedra del Palacio.” It is on view in the Cortez Palace in Cuernavaca where it is labeled as “Piedra Coatlan.”

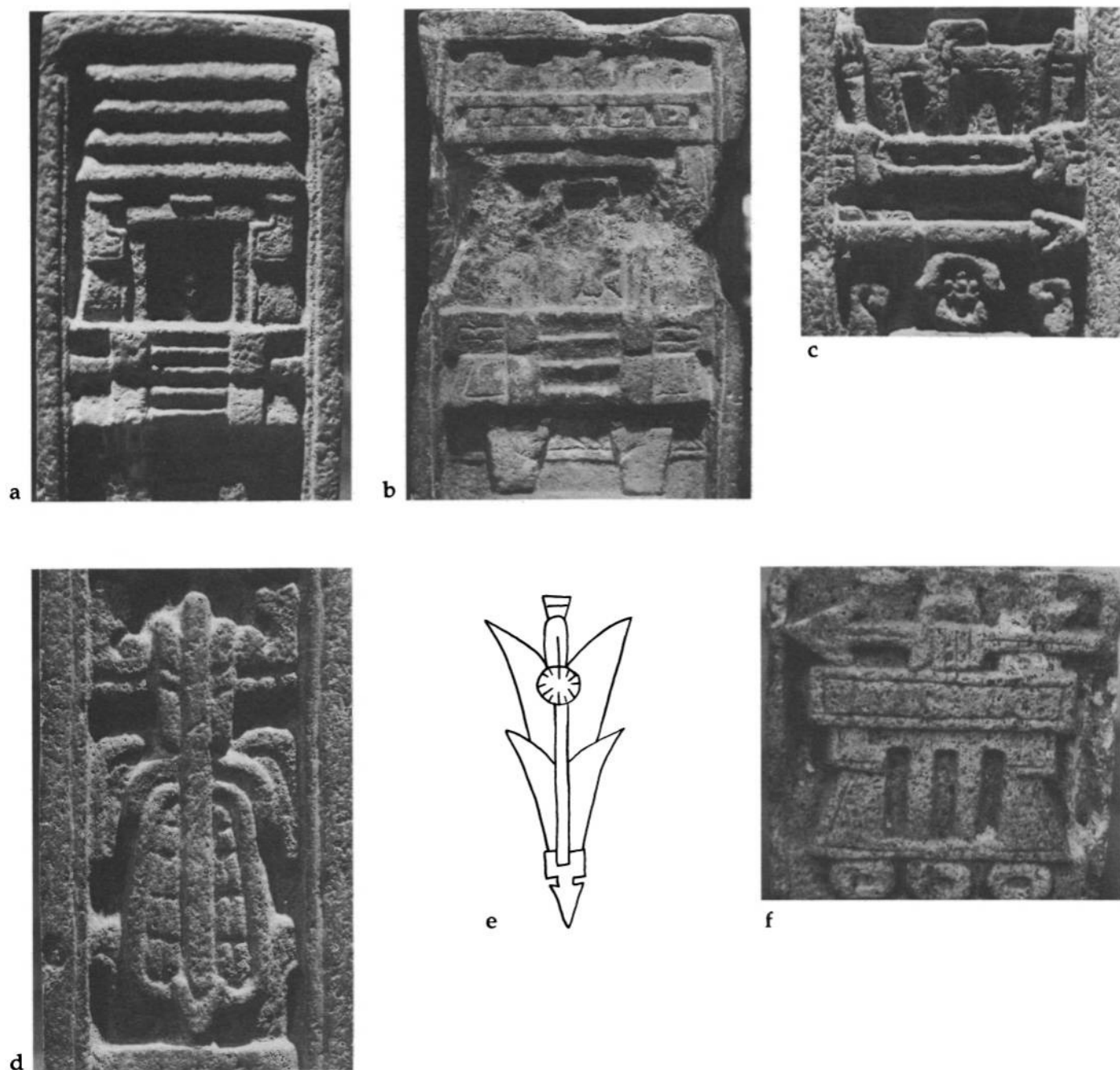


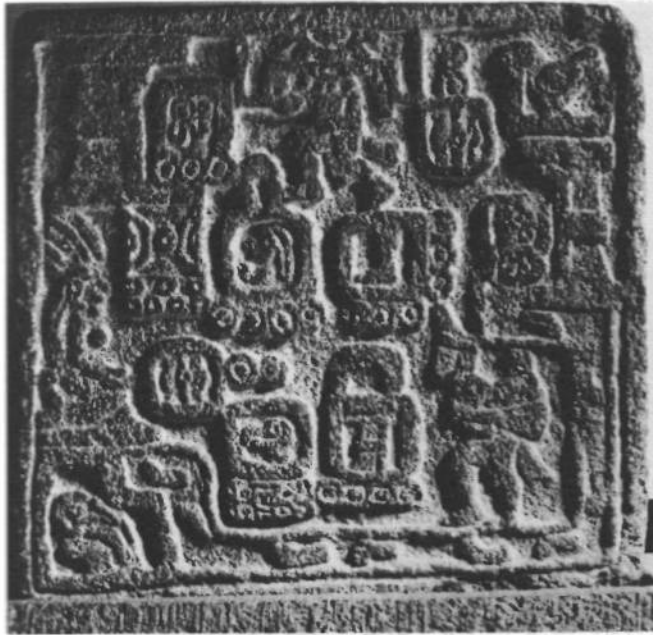
Fig. 19 Xochicalco toponyms. (a) Stela 1, (b) Stela 3, (c) Stela 2, (d) Stela 3, (e) Miacatlan toponym, *Matrícula de Tributos*; (f) Xochicalco stair block, photo by Debra Nagao.

profile temple enclosures and by toponyms formed in Aztec and Zapotec fashion. Footprints leading from one toponym to another convey action. The counterpoint of the standing human approaching the elite figure seated on a place sign suggests human enterprise.

The same event is portrayed on both the Palace Stone and the west side of the Pyramid of the Plumed Serpent (Fig. 21a). In both instances a human figure carries a large geometric burden. It is eroded in all but outline on the pyramid, but is a star-studded enclosure on the Palace Stone. In both instances a seated personage named Two Motion witnesses the event, which involves looped-cord

calendrical adjustment dates (though in each instance a different date is involved).²⁷ As discussed earlier, at Cacaxtla the star enclosure glyph is linked to capture, sacrifice, and bloodletting in a celestial context (Fig. 8a).

²⁷On the Palace Stone the glyphs 4 Rabbit and 4 House have the looped-cord handle seen on other Xochicalco monuments and discussed by Nicholson (1966). See the Stone of the Four Glyphs (Noguera 1961: 17), the New Fire Stone (Sáenz 1968: fig. 6), and the Three Rabbit Stone (Sáenz 1968: fig. 1). On the Three Rabbit Stone, Seven "Glyph A" and Three Rabbit occur together, as they do on the Palace Stone. See Kelley (1983: 197–198) for an unusual analysis that links these monuments with calendrical reform in A.D. 934 and the Palace Stone in particular with personages in Mixtec genealogical manuscripts.



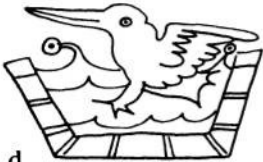
a



b



c



d



e

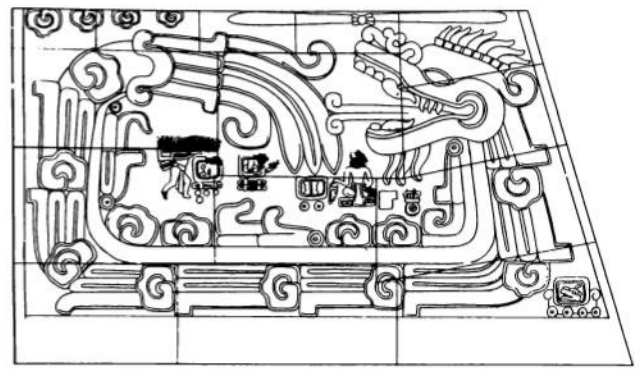


f

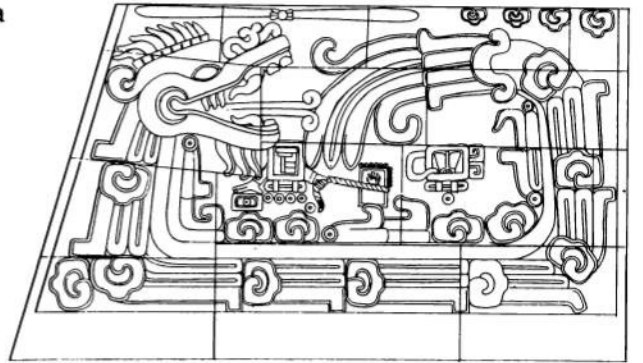
Fig. 20 (a) The Palace Stone, Xochicalco. Avian toponyms: b,c) the Palace Stone; (d,e) Matrícula de Tributos; Huitzilapan, Cacaloapan; (f) Teotihuacan mirror back.

Could the Xochicalco images refer to a metaphoric “capture” of a temporal period in order to make a calendrical adjustment?

On the west face of the Pyramid of the Plumed Serpent, the figure bearing the enclosure is named by a defaced glyph with a coefficient of nine. On the Palace Stone a simultaneous narrative takes place: the name glyph next to the burden bearer is Two Motion. Below, Two Motion sits on a toponym and a human burden is brought to him.



a



b

Fig. 21 West facade, Pyramid of the Plumed Serpent, Xochicalco (after Peñafiel 1890: pl. 183). (a) south face of the west facade, (b) north face of the west facade.

Place names on the Palace Stone are indicated by two avian glyphs. In the upper right, a profile bird within an enclosure is set atop a temple (Fig. 20b). A road with footprints rims the lower perimeter of the stone and leads to another toponym. Here a long-beaked bird is infixed within a stepped place sign (Fig. 20c). The identifying features of both birds are too indistinct to allow for precise zoological or toponymical identification. It is tempting to suggest that the place sign on the lower left with its bird and stepped platform is the same as that named on Stela 2 and the Thirteen Reed Stone. This is merely speculative, however.

Several Aztec place names combine bird and three-sided container, as does the place sign on the upper right of the Palace Stone. The Matrícula de Tributos (3v) lists Huitzilapan (*huitzitzilin*, hummingbird, and *apan*, canal) within the tributary province of Cuauhnahuac (Cuernavaca). In central Puebla is Cacaloapan (*cacalotl*, crow, and *apan*, canal) (Fig. 20d–e). Also within Cuernavaca’s tribute region in the Matrícula is Molotla (“Place of the Sparrows”), yet the three-sided container of the Palace Stone glyph suggests a name ending in *-apan*. In general the lack of detail in the small and indistinct Palace Stone carving makes positive place name identification impossible.

An unusual slate mirror, probably dating from this era, also depicts a bird enclosure glyph (Fig. 20f; Sotheby’s Catalogue 1984: 301). It is part of a four-glyph sequence (bird enclosure, reclining figure, four darts, coiled serpent)

in front of a seated Teotihuacan style warrior. The bird enclosure may be a toponym here as well. The existence of this unusual mirror with its glyphic images suggests that if we had a larger sampling of portable and perishable objects from Phase One of the Second Intermediate period we would probably find a larger corpus of glyphs as well.

Text as Image at Xochicalco

Analysis of the visual evidence suggests that the rulers of Xochicalco embedded glyphic information about political exploits in their monumental art. Like the rulers of other Mesoamerican polities, they were concerned with public affirmation and validation of their conquests. I have suggested that some low relief carvings on the Pyramid of the Plumed Serpent and other monuments are not merely narrative or emblematic scenes, but present glyphic references to towns such as Tlamacazapa, Miacatlan, and Cuautla, which were within the Xochicalco interaction sphere. Future study may bring more such toponyms to light. Such epigraphic investigations corroborate current ideas about Xochicalco as dynamic regional successor to the great Central Mexican cultural tradition.

Like their Aztec descendants, the inhabitants of Xochicalco constructed monuments as diagrams of their world. I suggest that the Pyramid of the Plumed Serpent, while a major architectural edifice, functioned like the Aztec's smaller monuments such as the Teocalli of Sacred Warfare and the Tizoc Stone. In visual and glyphic modes, the Tizoc Stone presents an image of historical and ethnic unification. The Teocalli of Sacred Warfare, a miniature pyramid that serves as a throne, conflates myth and history (Umberger n.d.: 172–190). Its imagery is textual.

So too, on the Pyramid of the Plumed Serpent, text and image are conflated: image is text. On the frieze, the repeating seated figures and their associated toponyms form pictographic images. These refer to historical events of political and economic import. Politicoeconomic concerns are inextricably linked with temporal and mythic ones: the "tribute roll" frieze and second story rest on the sloping base of undulating cosmic serpents and calendrical adjustments.

On the Xochicalco stelae triad, we do not find the separation of text and image that often occurs on Maya monuments. Instead, the text seems to be anthropomorphized: a humanlike visage appears on the front, and texts with feet are on the other three sides of each stela. The vertical stela format itself suggests a human form. Here the human form transforms into text. The permeability of the categories of text and image is, as I have suggested elsewhere (1983), a basic feature of Mesoamerican art and writing. It is an especially salient feature of Central Mexican art and writing from Teotihuacan to Aztec times.

OTHER SITES WITH EVIDENCE OF WRITING

During Phase One of the Second Intermediate period, Cacaxtla and Xochicalco reveal the richest epigraphic corpus. Yet monumental sculptures elsewhere record texts too. I shall examine these sites briefly. Aside from Teotenango in Central Mexico, most are in the peripheral

coastal lowlands. None substantially alters the picture of writing gained from examination of the two primary sites of Cacaxtla and Xochicalco.

Teotenango

An imposing, fortified hilltop site in the Valley of Toluca, Teotenango was inhabited from A.D. 650 until the conquest. In its first era of occupation (A.D. 650–750), the architecture resembled that of late Teotihuacan. Teotihuacan style figurines and stone sculpture occur as well (Alvarez 1975: figs. 28, 41). In Period 2 (A.D. 750–900), the ceremonial center began to take shape, and ceramics predominantly of Coyotlatelco type were used. Teotenango's florescence occurred in Period 3 (A.D. 900–1162). Subsequently, according to oral history, the site was conquered by the Chichimeca-Matlatzincas and later the Mexica (Piña Chan 1975: 130–133). The stone sculptures under consideration here date from Periods 2 and 3.

Sculptural and glyphic evidence from these centuries indicates that Teotenango participated in the pan-Central Mexican writing tradition. Calendrical conventions and reptile eye, bone, and blood glyphs all recall Xochicalco and Cacaxtla. Alvarez (1975) has listed and illustrated all of Teotenango's carved monuments. I will focus solely on the four relief monuments with legible glyphic signs.²⁸



Fig. 22 Trapezoidal Monument. Teotenango. Drawing after Alvarez 1975: figs. 7–8.

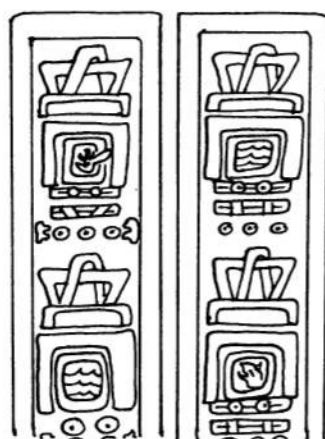
The so-called "Trapezoidal Monument" (Fig. 22) has low relief figural and glyphic signs on two surfaces, each approximately 57 cm on a side. When viewed in profile, these two carved surfaces slope in toward each other, forming a blunt wedge. On one side is carved a composite bird/butterfly with eye markings on its wings. Alvarez identifies the head as that of a *zopilote real* (king vulture) (1975: 284). The wings and segmented body are those of a butterfly. The creature wears a beaded necklace. Behind the butterfly wings is a 13 Reptile Eye glyph. On the other side of the monument a snarling jaguar, also with beaded neck ornament, is accompanied by a 2 Rabbit glyph.

The "Relief of the Jaguar" (Fig. 23a) also features the 2 Rabbit glyph behind a snarling seated jaguar. A realistic long bone is carved to the right of the 2 Rabbit glyph as well as on the thigh of the jaguar itself. Between its paws

²⁸In addition to these, there is one monument consisting of a two glyph sequence with numerical coefficients. The glyphs are almost completely unreadable. It is illustrated by Alvarez (1975: fig. 24).



a



b



c

Fig. 23 Teotenango monuments: (a) Relief of the Jaguar, (b) Teotenango Stela, (c) Rectangular Stone (b & c after Alvarez 1975: figs. 10, 6).

the jaguar holds a bleeding heart glyph similar to those in the battle scene at Cacaxtla. Martial connotations seem likely here as well. It is noteworthy that the bleeding heart glyph occurs as an integral part of the pictorial narrative. The jaguar clutches the glyph as an object. At Cacaxtla we saw the versatile use of the bloody heart compound as glyph, costume appendage, and descriptive annotation in a realistic heart sacrifice scene. Both at Cacaxtla and Teotenango text and image are conflated when conventional glyphic emblems are used in this manner. On the reverse of the Relief of the Jaguar a 9 House date is recorded with the looped cord motif that occurs so often during this era (see Nicholson 1966).

Only one stela exists at Teotenango (Fig. 23b). Two glyphs occur on each of the two carved sides. The stone is

broken below the second glyph. On one side, 13 Deer is paired with a Water date. Because the stela is broken at the coefficient, it is not clear if it records 2 Water or 4 Water. On the reverse, 13 Water is paired with a partly eroded glyph that may record the date 13 Serpent. All four glyphs are surmounted by trapeze-and-ray year signs.

The fourth carved stone at Teotenango with legible glyphs is the "Rectangular Stone" (Fig. 23c). A flowerlike form with either a trapeze-and-ray or a reed sign within is carved above a horizontal arrow with a numerical coefficient of 1. Alvarez suggests that this monument may be interpreted variously as 1 Flower, 1 Reed, or as a conquest of a place named 1 Flower (1975: 288).

Numerous glyphic and stylistic features suggest that the Teotenango monuments are coeval with those of Xochi-

calco and Cacaxtla. The long bone glyph occurs at both Teotenango and Cacaxtla. The RE glyph, trapeze-and-ray year sign, and blood compound occur at all three sites. As mentioned above, use of the blood compound within a narrative scene on the Teotenango "Relief of the Jaguar" recalls Cacaxtla as well. The flexible use of two counting methods, the dot system and the bar and dot system, is another shared feature. Furthermore, the Teotenango stela exhibits a variable convention for binding the 5-bars: either slanted trapezoidal bindings or doughnutlike rings rest on the horizontal bars. This occurs at both Xochicalco and Cacaxtla.

El Tajin (Fig. 24)

Glyphs occur mainly in the reliefs of the Building of the Columns at El Tajin (Kampen 1972: figs 32–38; Tuggle 1968: figs 1–9), though an occasional nominative glyph may appear elsewhere (i.e., Tajin Sculpture 2, Kampen 1972: fig. 39c). At El Tajin, historical figures in processional scenes are named by floating glyphs, as at Cacaxtla. Some of these glyphs, though not all, have numerical coefficients, in which case the numbers are formed with bars and dots. As we have observed at other sites, glyphs are comprised of various naturalistic and conventional elements: animal and human forms, twisted cords, axes, dotted circles, etc. (for examples see Kampen 1972: fig. 35b; Wilkerson 1984: fig. 7).

Caso first established the existence of the *tonalpohualli* at El Tajin and pointed out the calendrical name glyphs in the relief sculptures (1952–53: 342–343). More recently, Tuggle (1968), Kampen (1972), and Wilkerson (1984) have illustrated and discussed these monuments. Kampen points out that glyphs with numerical subfixes occur exclusively in the Building of the Columns (1972: 42). Glyphic sequences are rare (see Kampen 1972: fig. 33b). The most frequent sign is 13 Rabbit. Wilkerson characterizes 13 Rabbit as a late (perhaps tenth century) ruler of El Tajin, depicted and named in narrative scenes of conquest and ritual sacrifice that affirm his power (1984: 112–114).



Fig. 24 Glyphs on Building of the Columns relief, El Tajin (after Wilkerson 1984: fig. 7).



Fig. 25 The Maltrata monument (drawn after Medellín Zenil 1962: figs. 14–15).

Maltrata (Fig. 25)

At the site of Maltrata, Veracruz, south and east of El Tajin, an irregularly shaped monolith carved on two sides in low relief records four complete and three fragmentary glyphs. All have numerical coefficients. On the north side of the stone, a standing warrior and a seated female are linked with the dates 8 Rabbit and 7 Rabbit respectively. Two more glyphs are illegible. On the east side, a celestial feathered serpent with a star glyph pendant from its body is linked with the date 4 Movement.²⁹ Below, an illegible glyph with the coefficient 9 is carved within a Tajin style temple. Above, the date 1 House occurs, with a looped cord around the cartouche.

The seated female figure with trapeze-and-ray headgear, and the looped cord 1 House glyph suggest links with Xochicalco and other sites in the central highlands. Associated pottery fragments and the Tajin type architectural profile on the relief corroborate a date between A.D. 600 and 900. (Medellín Zenil 1962: 559–561).

²⁹Medellín Zenil notes that 4 Movement is "el nombre calendarico de Xolotl, el divino gemelo de Quetzalcoatl, dios de una de las fases del planeta Venus" (1962: 560).



Fig. 26 Piedra Labrada Stela 1.

Piedra Labrada (Fig. 26)

Further south and east, near Matacapán, is the site of Piedra Labrada, from which comes a 2 m high andesite monument designated Stela 1. In vertical sequence are carved a fire bundle glyph, 7 Reptile Eye, and three fourway crosshatch glyphs with a volute on top.³⁰ Both 7RE and fourway crosshatch appear at a number of other sites, most notably Xochicalco, where they occur as the first and last glyphs on Stela 1.

Cerro de las Mesas

Near the south bank of the Rio Blanco, in southern Veracruz, lies the site of Cerro de las Mesas. The monuments here are deserving of further study; they range from Olmecoid, to Teotihuacanoid, to Mayoid. Some monuments bear columnar texts that may relate to early Maya writing; their associated imagery corresponds to Izapan and Early Classic Maya dynastic imagery (Sterling 1943: figs. 9–11).

Two monuments bear Central Mexican glyphs: Stelae 15 and 4 (Sterling, 1943: pl. 22). On Stela 15, a frontal Teotihuacan style figure bears many Teotihuacan emblems. The figure is “labeled” with two Central Mexican style numerical glyphs. The top one has a coefficient of one and is an animal head. The one beneath has a coefficient of four and may be a water glyph. Sterling calls them “One Ocelot and Four Water” (1943: 44). Stela 4, whose closest resemblances are with Cotzumalhuapa monuments in southern Guatemala, depicts a seated profile figure on a raised throne. In front of him is a 5 Monkey glyph with squared cartouche. While this is not the place to deal with the iconographic implications of these monuments, I include them to demonstrate how widespread the use of

³⁰Melgarejo Vivanco’s manipulation of the possible calendrical implications of the date glyphs on this stela led him to the improbable conclusion that it was erected in A.D. 1483 (1960: 35). The style and iconography of the monument are indubitably Middle Horizon to Second Intermediate period.

Central Mexican style glyphs is throughout the peripheral coastal lowlands.

Tula and Chichen Itza

As we have seen, public monumental art at Cacaxtla and El Tajin featured the use of nominative glyphs that identify human figures in narrative scenes. At Tajin, this was a late feature, according to Wilkerson (1984: 112–114), occurring in the tenth century.

Coeval use of name glyphs occurs at both Tula and the more distant Chichen Itza. At both sites name glyphs occur on pillars above the heads of warriors (Fig. 27). The use of the pillar format recalls El Tajin. At Chichen Itza, name glyphs also occur in narrative scenes of warfare and ceremony, recalling Cacaxtla.³¹

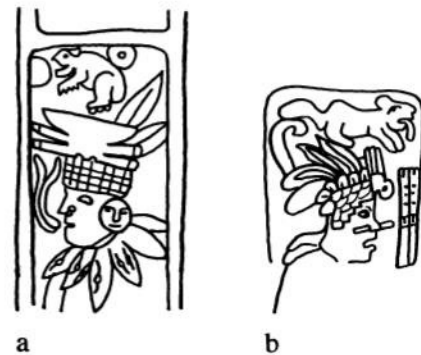


Fig. 27 Warriors and name glyphs from (a) Chichen Itza (after Maudslay 1889–1902, 3, pl. 38); (b) Tula (after Tozzer 1957: fig. 508).

Acosta called the Tula Pyramid B glyphs totemic animals referring to military rank (1956–57: 100); it seems more likely that they name the individuals depicted. All the glyphs are simple logograms: human, bird, coyote, and so forth. A much larger corpus of name glyphs occurs at Chichen Itza. Charlott estimated that at least fifty-seven name glyphs occur on the columns of the Northwest Colonnade of the Temple of the Warriors alone (Morris, Charlott, and Morris 1931: 311). Other name glyphs occur in the narrative reliefs in structures associated with the Great Ball Court (see Maudslay 1889–1902, 3: pls. 38, 45, 46, 47, 49, 50).

While Chichen Itza may seem to be geographically outside the scope of this paper, I include it here because the glyphic labels on these columns and narrative reliefs have more in common with the simple, logographic Central Mexican system than with the more arcane, complex Maya hieroglyphs used at Chichen Itza and throughout the Classic Maya zone. The use of these simple glyphs is one of the many links between Chichen Itza and Central Mexico (see Cohodas, this volume).

In a recent study, Kristan-Graham has suggested that the glyphs on the pillars at Tula Pyramid B name the figures as

³¹For Tula see Acosta 1956–57: fig. 24. For Chichen Itza see Maudslay 1889–1902, 3: pls. 38, 45–47, 49–50; Tozzer 1957: figs. 506, 598; Morris, Charlott, and Morris 1931, 1: figs. 231–236 and 2: pls. 59, 69–123.

lineage ancestors of Maya affiliation (n.d.: 1). There is, however, no reason to surmise, as she does, that the names at Tula necessarily are Yucatec patronyms simply because they depict some of the same animals found in Chichen Itza name glyphs (n.d.: 5). Many names and their icons were widely shared in Mesoamerica. Witness the famous Mixtec hero 8 Deer and the similar 3 Deer at Cacaxtla, or 10 Rabbit at Chichen Itza and 13 Rabbit at El Tajin. Shields are used in name glyphs at Palenque and Yaxchilan; birds at Chichen Itza and Yaxchilan; bones at Cacaxtla, Tikal, and Chichen Itza. A finite universe of objects and animals is depicted in glyphs. It does not necessarily follow that an isomorphic relationship exists between use of glyph image and family or linguistic group, especially when the glyphic image is a simple logogram rather than a compound glyph with phonetic reading.

Kristan-Graham (n.d.: 6) astutely observes, however, that simple logograms like those used at Tula and Chichen Itza are useful in multicultural situations: "Since true literacy is not required to read logographs, language, class and culture are not necessarily barriers to reading name signs. Indeed, name signs may have been well-suited to a cosmopolitan center such as Chichen Itza, where a variety of classes and ethnic groups could have read them."

In addition to the name glyphs, a handful of date glyphs occurs at Tula (see Acosta 1956-57: fig. 22). These glyphs share with Xochicalco the use of two different numbering systems. Bars and dots as well as dots alone are used. The bars are wrapped with both vertical and diagonal bands, as at Cacaxtla and Xochicalco (see Figs. 7, 15, 21).

CONCLUSIONS

We often think of writing in Central Mexico exclusively as a product of the Late Horizon and Early Colonial period. Yet painted walls and stone monuments dating from as much as eight hundred years prior to the Aztec era suggest that the Aztecs inherited the basic principles of their writing system from their predecessors in northern Mesoamerica.

I have suggested that, starting at Teotihuacan and continuing at sites such as Cacaxtla and Xochicalco, the compounding of pictorial graphemes in building-block fashion foreshadows the structure and process of glyph formation by the Aztecs. The scribes at these sites, like their Mexica successors, focused on nominative, calendrical, and toponymic information in their inscriptions. A highly developed conventionalized system for the recording of place names was in use in Central Mexico by early in Phase One of the Second Intermediate period. Like the glyphic system known from the time of the Conquest, this system was inextricably intertwined with visual imagery. Visual homonyms and metonyms were common.

The evidence accumulated here suggests that while Central Mexican writing had its genesis at Teotihuacan, it is during the era after the decline of Teotihuacan hegemony that writing became more widespread. The political and economic enterprises that preoccupied the elites of these emergent polities were at least minimally recorded on

monuments. Because of the paucity of surviving perishable materials such as wood, paper, and animal skins from the pre-Aztec eras, we shall almost certainly never know the history or full extent of the development of writing in this region. This survey has demonstrated that through study of the monumental arts we are afforded at least a glimpse of "the black, the red of the ancient ones."

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The Coyotlatelco Culture and the Origins of the Toltec State

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INTRODUCTION AND BACKGROUND

TULA WAS ONE OF THE GREAT Pre-Hispanic urban centers in the Central Mexican highlands. During the Early Post-Classic period (ca. A.D. 900–1200) this city extended over an area of nearly 16 km² (Mastache and Crespo 1982: 2). Tula had a complex socioeconomic structure, with highly developed social, economic, and political institutions, and a population in the tens of thousands (Diehl 1983: 60; Mastache and Cobean 1985: 286–293; Healan et al. 1983: 132–136). Although substantial research has been done concerning the nature of Tula during its apogee (Acosta 1956–57; Diehl 1981; Yadeun Angulo 1975; Healan 1977, n.d.), until recently its origin and development were almost completely unknown.

The only published investigations that specifically deal with Tula's beginnings are the pioneer synthesis of the city's occupation sequence by Acosta (1945: 55) and the reports by Matos (1974) and Cobean (1982) on excavations at the ceremonial center known as Tula Chico, which corresponds to the first stage (ca. A.D. 800) of urbanism at Tula (Figs. 3, 4). We will discuss the findings of these and more recent investigations at Tula Chico later in this paper, but it is important to state here that during this period the city extended over an area of 4–5 km² and that its ceramic complexes are part of Central Mexico's Coyotlatelco cultural tradition (Tozzer 1921: 51–53; Rattray 1966; Cobean n.d.: 42, 292). Additional information concerning Tula's origins was provided by surveys of Pre-Hispanic settlements in nearly 1,000 km² of the region surrounding the ancient city (Mastache and Crespo 1974: 74–75; n.d.). These surveys indicate that the origins of Tula's population and of the socioeconomic and political institutions that formed its Early Post-Classic state can be traced to cultural processes that took place during the Late Classic "Coyotlatelco" period and in the preceding Early Classic period when the region was integrated into the political and economic system of the Teotihuacan state (Mastache and Cobean 1985: 277–279; Mastache 1976: 67–68; Diaz 1980: 71–72). By the end of the fieldwork phases of the projects

done in and near Tula during the 1970s by Mexico's Instituto Nacional de Antropología e Historia (INAH) and the University of Missouri, it was clear that in order to explain the development of the Toltec state, it would be necessary to investigate the cultural processes that took place in the region during a period of five to six centuries before Tula's apogee.

Research Objectives

In 1983 we began a project that is investigating in detail specific aspects of the origin, development, and expansion of the Toltec state. This project is called "Tula y su Área Directa de Interacción" (Mastache and Cobean n.d.). Several of its objectives concern Tula's origins, especially the roles of the region's Coyotlatelco populations in the development of the Toltec state. Our research involves the study of the internal social and political structures and the economic organizations of Coyotlatelco settlements in the Tula region. It has three specific goals:

- (1) to improve the chronology for the Coyotlatelco settlements in order to discern if all of them are coeval, or if there exist important chronological variations between different types of sites;
- (2) to investigate the hypothesis that some or most of the Coyotlatelco population represents groups that originated in the Bajío or elsewhere in the northern periphery of Mesoamerica;
- (3) to study the degree of political and economic integration on the regional level for this period in order to determine whether or not the Coyotlatelco settlements were politically and economically autonomous.

Our fieldwork was mainly dedicated to large-scale excavations of residential structures and intensive study of workshops and specific activity areas. Special emphasis was given to surveys and excavations of lithic workshops and activity areas associated with the use of stone tools. This was done because we knew that the Coyotlatelco culture in the Tula region possesses a lithic complex based mainly on rhyolite and basalt tools. This is very different

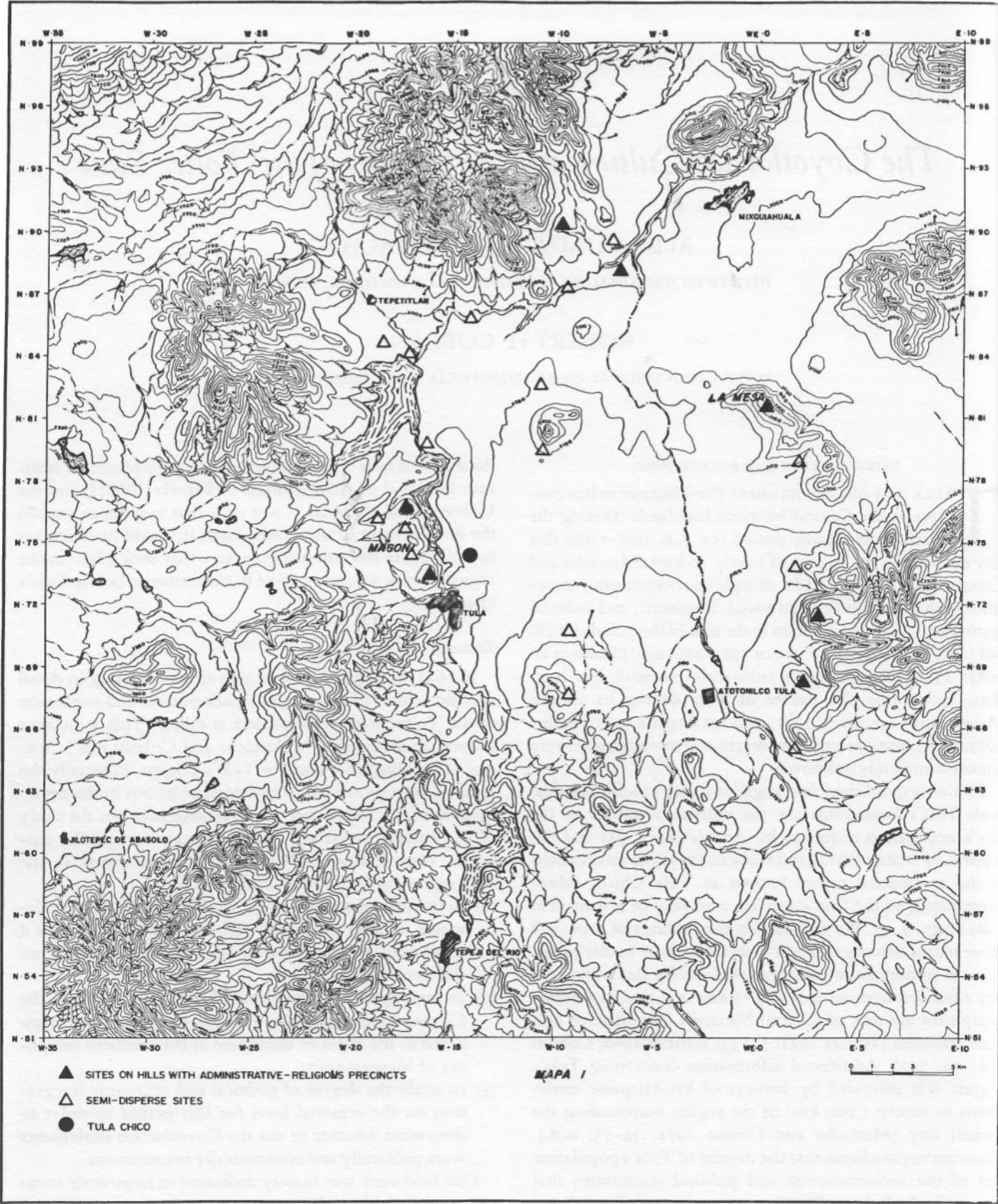


Fig. 1 Map of the major Coyotlatelco occupations in the direct interaction area of Tula.

TABLE 1: SELECTED CENTRAL MEXICAN CHRONOLOGIES^a

Approx.)		Basin of Mexico	Teotihuacan Valley (Names)	Teotihuacan Valley (Numbers)	Tula Region
1500		AZTEC IV	TEACALCO	AZTEC IV	TESORO
1400	LATE	AZTEC III	CHIMALPA	AZTEC III	PALACIO
1300	POST-CLASSIC	AZTEC II/I	ZOCANGO	AZTEC II	FUEGO
1200			ATLATONGO		121212
1100	EARLY		MAZAPAN	MAZAPA	TOLLAN
1000	POST-CLASSIC	MAZAPAN			TERM. CORRAL
900		COYOTLATELCO	XOMETLA	COYOTLATELCO	CORRAL
800			OXTOTIPAC	PROTO-COYOT.	PRADO
700		METEPEC	METEPEC	TEOTIHUACAN IV	
600	CLASSIC	XOLALPAN	XOLALPAN	TEOTIHUACAN IIIA	(CHINGU)
500				TEOTIHUACAN III	CLASSIC
400		TLAMIMILOLPA	TLAMIMILOLPA	TEO. IIA-III	
300				TEOTIHUACAN IIA	
200	TERMINAL	MICCAOTLI	MICCAOTLI	TEOTIHUACAN II	
100		TZACUALLI	TZACUALLI	TEOTIHUACAN IA	TERMINAL
0	FORMATIVE	CUICUILCO	PATLACHIQUE	TEOTIHUACAN I	FORMATIVE
B.C. 100				PROTO-TEO. I	
200					(TEPEJI)
300	LATE	TICOMAN III	LT. CUANALAN		LATE
400	FORMATIVE	TICOMAN II	MID. CUANALAN		FORMATIVE
500		TICOMAN I	EAR. CUANALAN		
600					
700	MIDDLE	ZACATENCO	CHICONAUHTLA		
800	FORMATIVE				

^aAdapted with modifications from Millon 1981: fig. 7-7.

from the obsidian-based industries of Early Classic Teotihuacan (Spence 1981) and Tula during its apogee (Healan et al. 1983), and probably has close ties with similar basalt and rhyolite tool complexes in the northern Mesoamerican periphery. Analyzing these lithic industries has made it possible for us to reconstruct key aspects of regional economic organization during the Coyotlatelco period.

THE TEOTIHUACAN-RELATED OCCUPATIONS IN THE TULA REGION

Although this paper is principally devoted to the Coyotlatelco culture, it is necessary to discuss briefly what is known about the role of Teotihuacan in the origins of the Toltec state. As we observed above, the Tula region was directly integrated into Teotihuacan's political and economic system during much of the Early Classic. Teotihuacan occupation and influence in the area climaxed during the Tlamimilolpa phase (A.D. 200-400) and then experienced an apparent reduction in the succeeding Xolalpan and Metepec phases (A.D. 400-750) (Table 1). The Tula region contains two very large Teotihuacan settlements, Villagran and Chingu. Villagran covers approximately 80 hectares and is less than one km north of Tula's Early Post-Classic urban zone. Chingu has an area of 2.5 km² and lies 10 km east of Tula on the dividing line between the main alluvial valley and a major limestone deposit. Chingu is thought to be the area's key political and administrative center during the Early Classic and probably

functioned as an intermediary between Teotihuacan and the Tula region (Mastache and Crespo 1974: 74; Diaz 1980: 72).

The greatest density of Classic period sites is found in the eastern section of the area, especially on low hills facing the east bank of the Tula River and in the limestone zone to the southeast (Fig. 1). Numerous cultural traits indicate Teotihuacan's direct social and cultural ties with these sites: the presence of apartment compounds, the general plans and orientations of other buildings, and *talud-tablero* construction techniques similar to those on Teotihuacan building facades. In addition, ceramics and figurines are in Teotihuacan style, although locally made pottery types do show some variations from Teotihuacan wares.

The Teotihuacan state created a substantial infrastructure for exploiting various resources in the Tula area, specifically a large irrigation system in the central valley alluvium which permitted intensive agriculture, and numerous limestone extraction zones in the southern part of the area (Mastache 1976: 68; Crespo and Mastache 1981: 100). This infrastructure made an important contribution to the Toltec state in later times when expanded versions of these resource exploitation strategies became key elements in the economy of Early Post-Classic Tula.

As noted above, Teotihuacan's maximum penetration of the Tula area appears to coincide with the Tlamimilolpa phase. The apparent population decline after A.D. 400 in the Tula area is difficult to explain because it coincides with Teotihuacan's maximum urban expansion, population size,

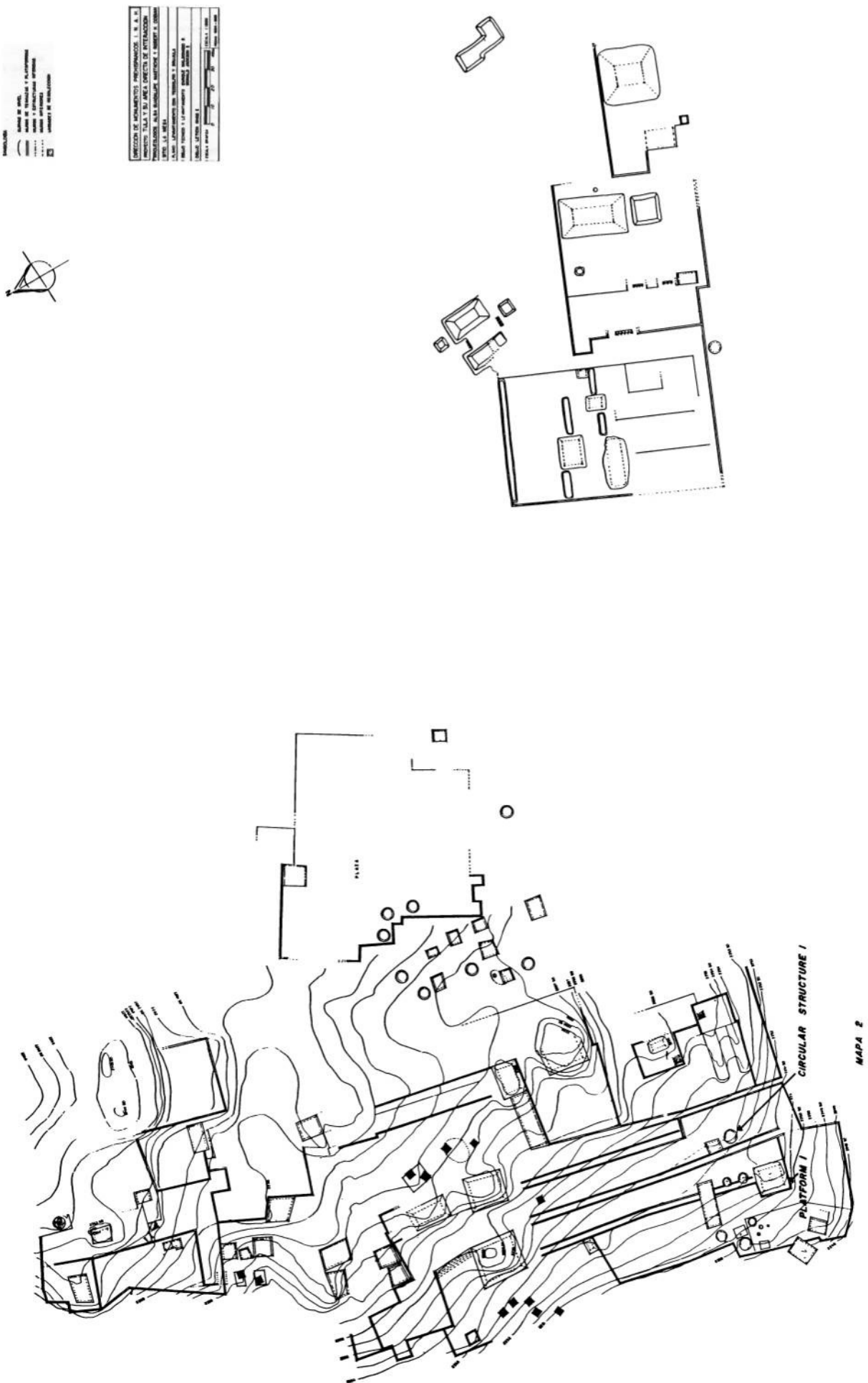


Fig. 2 Map of La Mesa, Hidalgo.

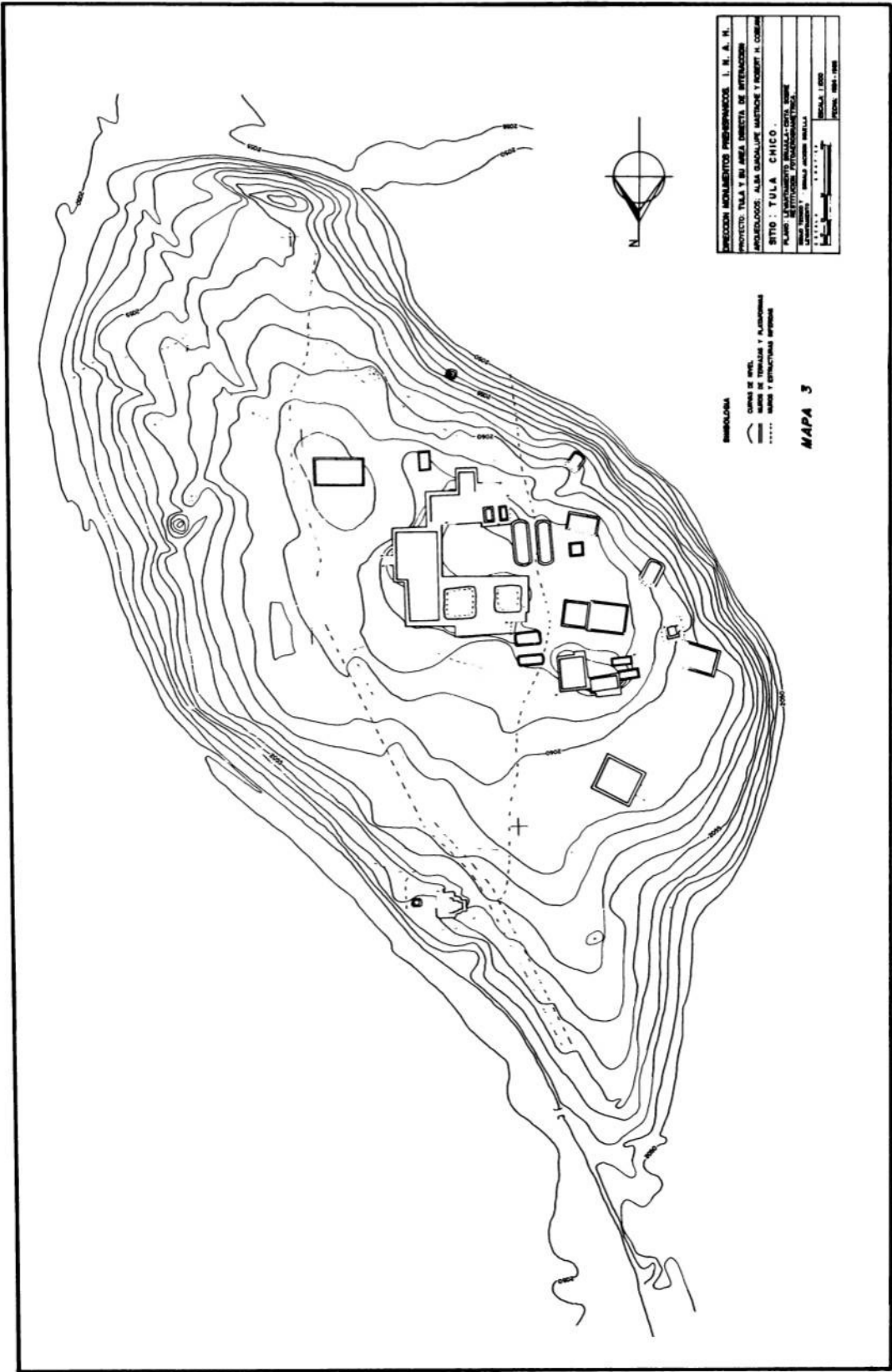


Fig. 3 Map of the plaza of Tula Chico and adjacent zones.

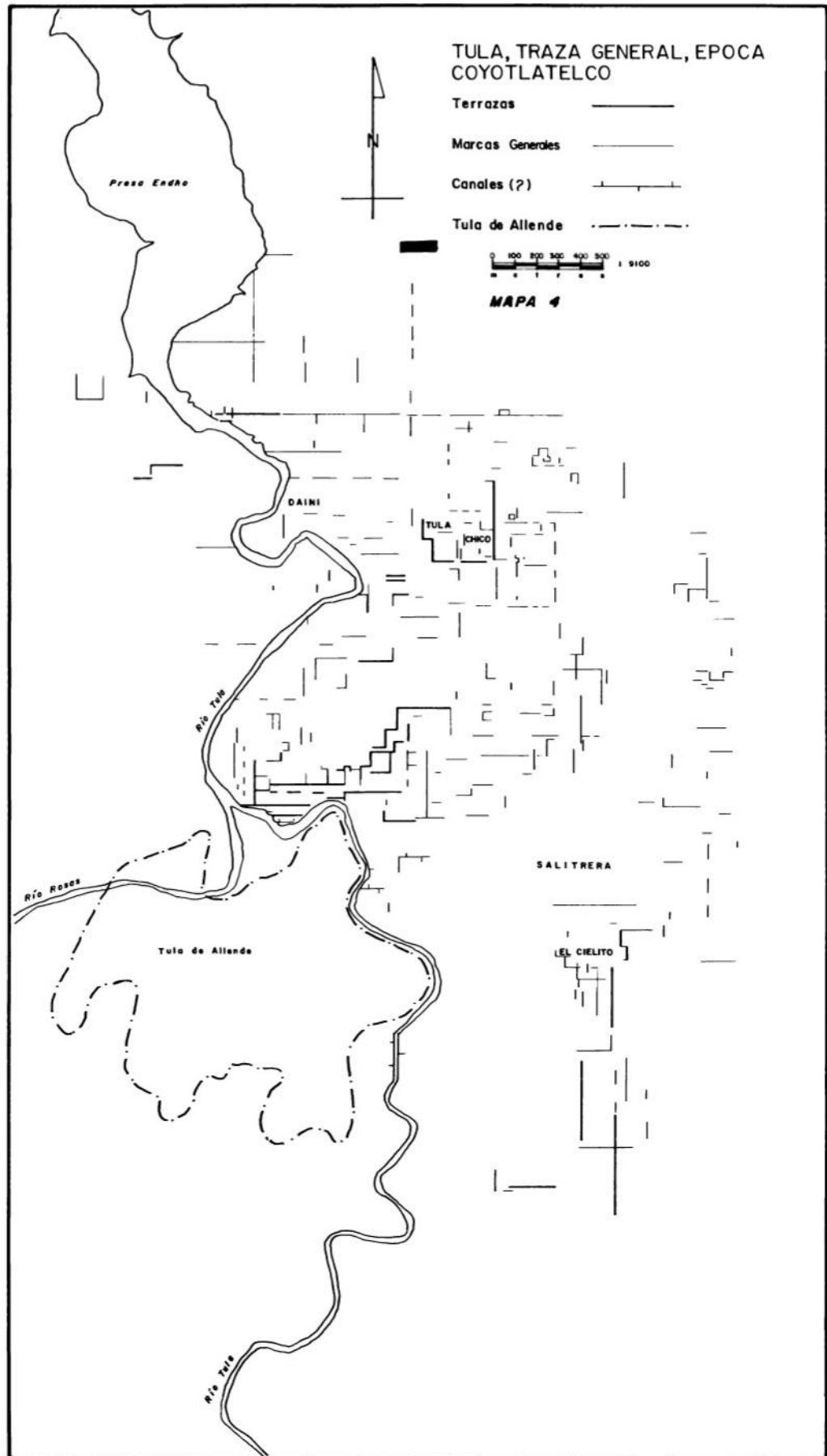


Fig. 4 Map of the major orientation system for the structures and terraces of the Coyotlatelco occupation in Tula's urban zone (from Mastache and Crespo, 1982: fig. 3).

and socioeconomic complexity (Millon 1973: 59). If this decline is real and not simply an artifact of incomplete information, it means that the Teotihuacan state was already experiencing political or economic troubles in parts of its "outer hinterland" as early as the Xolalpan phase (cf. Millon 1981: 222). In the case of the Tula region, these problems were not the result of competition from local rival states because none existed. A collapse of Teotihuacan's regional bureaucracy along the lines of the model proposed by Cowgill (1979: 184–191) would be more likely. Only intensive excavations of Early Classic sites in the Tula area could give us a detailed understanding of this process.

What is clear, however, is that nearly all of the Teotihuacan-related settlements in the Tula area were abandoned by the end of the Metepec phase (A.D. 650–750). This abandonment was directly related to Teotihuacan's decline as a political and economic center, a decline that involved radical changes in Central Mexican population distributions, settlement patterns, and political and economic relationships (Sanders et al. 1979: 133–137). These changes included the development of numerous autonomous regional centers, many of which were established in easily defended positions such as hilltops, indicating the unstable political climate of the times. These regional centers developed local styles in ceramics, architecture, iconography, and other cultural elements: styles that suggest the presence of new ethnic groups or radical changes in the older cultural traditions (Jiménez Moreno 1966: 59–80; Nagao, this volume). The new centers include Xochicalco (Armillas 1964: 312; Litvak King 1970; Hirth 1984, this volume), Teotenango (Piña Chan 1975), Cacaxtla (García Cook 1981: 264–270; Baird, this volume; Nagao, this volume), Cholula (Marquina 1970; Dumond and Muller 1972), and El Tajín (García Payón 1971: 526–542).

THE COYOTLATTELCO CULTURE IN THE TULA REGION

Although it has long been thought that the Coyotlatelco people played fundamental roles in the decline of Teotihuacan's state and the rise of Tula, they remain one of the least studied and most poorly understood cultures in Central Mexico (Armillas 1950: 56; Sanders 1965: 183; Rattray 1966: 87–109; Diehl, this volume). The abandonment of Teotihuacan-related sites in the Tula region is accompanied by radical changes in ceramic traditions and settlement patterns. The principal new pottery types are related to the Basin of Mexico Coyotlatelco complex defined by Tozzer (1921: 51–53), Rattray (1966), and Armillas (1950: 56–67). The Tula chronology is based upon cross-ties with Coyotlatelco complex sites in the Basin of Mexico and on Cobean's (1982) excavations in the Tula Chico center. Three provisional phases have been defined on the basis of materials found in these excavations (Table 2): Prado (ca. A.D. 700–800), Corral (ca. A.D. 800–900), and Terminal Corral (A.D. 900–950). These dates are provisional and lack radiometric determinations from Tula or the Basin of Mexico. Thus the absolute chronology of the sites we are considering is tentative.

Two Coyotlatelco settlement types can be defined in the

Tula area: hilltop communities and those located on more gently sloping lower elevations, frequently the crests of low hills. Hilltop sites are almost always surrounded by cliffs or very steep slopes, settings that offer good defensive and offensive positions in a military sense and are located at some distance from irrigatable land. Sites of the second type are frequently close to both water and alluvial land (Fig. 1).

All of these Coyotlatelco settlements contain cultural elements that strongly suggest that at least one segment of their population consisted of recent immigrants from the northern Mesoamerican periphery, perhaps from areas in Queretaro and Guanajuato or Zacatecas and Jalisco (Mastache and Cobean n.d.). Elements shared by Coyotlatelco and northern Classic cultures include community patterns as expressed in ceremonial precinct layout, construction techniques, and artifact types. The ceramic styles of Tula Coyotlatelco and many northern cultures are extremely

TABLE 2: PROVISIONAL CHRONOLOGY FOR THE TULA AREA

A.D.	Phase	Cultural Complex
1520	TESORO	"Aztec IV" and other early Colonial Aztec complexes
	PALACIO	Pre-Hispanic "Aztec III" and possibly some pre-Hispanic "Aztec IV"
1350	FUEGO	"Aztec II–III" Transition (Probably will be poorly defined at Tula. Possibly was a time of massive depopulation in the Tula area.)
	TOLLAN	The Tollan phase appears to be the only time when there was a large city at Tula. It is related to the Mazapan and Atlatongo complexes of the Teotihuacan Valley, but probably none of the previous names for this culture are worth using anymore. It probably will be divided into subphases eventually.
950	TERMINAL CORRAL	A transitional complex containing some Corral and "proto-Tollan" pottery types
900	CORRAL	A local variant of the Coyotlatelco culture: Its ceramic complex has numerous similarities with Coyotlatelco pottery in the Basin of Mexico and some differences.
800	PRADO	Has a poorly known "hybrid" ceramic complex which contains some Coyotlatelco types along with distinctive "elite" types which may be related to Classic cultures in the Bajío.
700		

similar (Braniff 1972: 306–307, 316–317; Crespo 1976: 45–62; Kelley and Kelley 1971: 5, 57–73; Nalda n.d.: 93–129); many of the chipped-stone tools, especially scrapers made from basalt and rhyolite, are nearly identical (Crespo n.d.; Spence 1971: 36–39; Beatriz Braniff, personal communication, 1986; Martinez and Nieto n.d.: 105–110).

On the basis of preliminary analyses of ceramic complexes, we propose that chronological differences account for the two types of Coyotlatelco sites: hilltop settlements such as Batha, El Aguila, La Mesa, and Magoni probably correspond to the earlier period, while Tula Chico and other sites at lower elevations appear to be later (Fig. 1). The hilltop settlements have higher percentages of northern periphery-like ceramics. In terms of their vessel forms and painted decorations, these appear to be prototypes for the more pure Coyotlatelco complexes at Tula Chico. It also is noteworthy that the hilltop settlements appear to have single phase occupations spanning only a few generations, while in contrast recent excavations have shown that Tula Chico was occupied for several centuries (Cobean 1982: 59–70). Preliminary settlement pattern studies suggest that there was a chronological overlap between the Teotihuacan-related settlements and the hilltop Coyotlatelco sites in the Tula region. The degree to which Coyotlatelco and Teotihuacan-related site locations differ is striking: every Coyotlatelco site lacks Teotihuacan occupation and vice-versa. This difference makes us believe that the earliest Coyotlatelco groups settled only high, easily defended hilltops because the better quality lands at lower elevations having a potential for irrigation were still occupied by Teotihuacan-related populations. Thus in one sense the first Coyotlatelco populations did not really occupy the Tula area, they only settled the hills surrounding it (Fig. 1). This process of hilltop settlement may have begun as early as A.D. 600–700.

A second phase of Coyotlatelco settlement may have begun in the Metepec phase (A.D. 650–750) when the Teotihuacan state apparatus withdrew from the Tula region and the Teotihuacan-related sites were abandoned. This process probably initiated a movement of people from the hilltop sites into the lower elevations. During this period Tula Chico was founded, with an initial population consisting of an ethnic and cultural synthesis of people from the northern periphery-related hilltop Coyotlatelco sites along with remnant groups from the abandoned Teotihuacan-related settlements. Radiocarbon dates are of fundamental importance for the exact chronological placement of both kinds of Coyotlatelco sites, which would allow us to understand better the collapse of Teotihuacan and the rise of Tula.

All of the Coyotlatelco hilltop sites that we have studied possess single component occupations. They even lack the Late Post-Classic (Aztec III) occupations so common in other environmental zones in the area. Analyses of ceramics and stratigraphy at these sites indicate that they were inhabited for relatively short periods of time, in some cases perhaps less than a century (Mastache and Cobean n.d.). In addition, our investigations indicate that there probably was a pattern of political fragmentation on a regional level

at this time, with most communities functioning as autonomous political and economic units. The various lines of evidence pointing to this conclusion include isolated hilltop locations with both defensive and offensive potential, an almost total lack of foreign goods or other indications of long-distance trade, and approximate parity in community size and the size and layout of ceremonial administrative precincts.

Furthermore, each site appears to have been economically self-sufficient. Each had its own terrace system for non-irrigated (*temporal*) agriculture, and most, if not all, contained ceramic and lithic workshops. Each community exploited local rhyolite, basalt, and, to a lesser extent, chert deposits. Recent investigations of Coyotlatelco lithic industries by Jackson (n.d.) and Rees (n.d.) indicate that obsidian tools are relatively rare compared to their frequency at Teotihuacan-related sites and later Tollan phase communities (Healan et al. 1983: 139–142; Diaz 1980: 65–66). Most of the Coyotlatelco obsidian is gray, with close similarities in color and texture to material from the Zinapécuaro. Michoacan source system (Cobean and Vogt n.d.: 57–58). We attribute the scarcity of obsidian and other imported goods at Coyotlatelco sites to be a result of the decline of Teotihuacan, which disrupted many Central Mexican long-distance trade and supply networks and created local scarcities of key materials which were previously controlled by the Teotihuacan state. The production of rhyolite, basalt, and chert tools in the Tula region in a sense constitutes an alternative industry to that of obsidian, and also is related to the northern cultural traditions of the Coyotlatelco people.

In this paper we will concentrate on the description of three Coyotlatelco sites: La Mesa, Magoni, and Tula Chico. The first two are hilltop sites which we assign to the earliest Coyotlatelco occupation in the area. Tula Chico appears to belong to a later phase of the Coyotlatelco culture and clearly constitutes the initial phase of Tula's urban development (Mastache and Cobean 1985: 280).

La Mesa

La Mesa occupies a hilltop of the same name southeast of modern Tlahuelilpan and ca. 14 km east of Tula (Fig. 1). The base of Cerro la Mesa starts at ca. 2,100 m, and its summit lies at approximately 2,260 m above sea level. Although the site is heavily eroded, many of the structures and other archaeological features are well preserved. This is also true for Magoni and most of the other hilltop sites. A large array of architectural elements is visible on the surface, including terrace walls, platforms, stairway remnants, and numerous rectangular and circular foundations (Figs. 2, 9, 10). The site covers an area approximately one square kilometer, but large sections of the interior lack occupation debris. La Mesa is divided into three discrete sectors, each having its own ceremonial-administrative precinct indicated by plazas and mounds which appear to represent ceremonial buildings and elite residences. These precincts occupy an enormous platform (Fig. 6) at the summit of the hill and surround what appears to be a great central plaza joining the three sectors of the site. Each



Fig. 5 The western zone of La Mesa, Hidalgo.



Fig. 6 Excavation of Platform 1, La Mesa.



Fig. 7 The Toltec small stone construction technique, Platform 1, La Mesa.

precinct is in turn surrounded by extensive systems of terraces and platforms which are remains of residential zones and possible cultivated areas. The densest and most extensive occupation area is located in the western sector of the site (Figs. 2, 5).

Two types of residential structures are visible on the surface at La Mesa: rectangular platforms measuring 10–20 m on a side and circular foundations of various sizes. Rectangular platforms located near pyramids may have served as elite residences. To date we have completely excavated one rectangular and one circular structure and portions of one rectangular and two circular buildings. The completely excavated rectangular structure (Platform 1 on Fig. 2) was found in an excellent state of preservation. Two large rooms on its east side are connected to a long vestibule and stairway on the west. The floors are covered with stucco. Wall facades consist of tabular basalt and limestone blocks laid in a style very similar to the “Toltec small stone” technique common at Tula in the Tollan phase (Healan 1982: 128). Two hearths were identified, and the broken cooking vessels and burnt food remains associated with one clearly indicate a kitchen area. Concentrations of stone and bone tools may be the remnants of a leather-working station.

The building plan of this structure and the partially excavated rectangular platform indicate a very different concept of residential living than those of Tollan phase House Groups (Healan 1977: 45–46; n.d.) or the Classic period apartment compounds at Teotihuacan (Millon 1981: 203). The isolated houses are not grouped around patios, unlike either Tollan phase structures or the large, complex

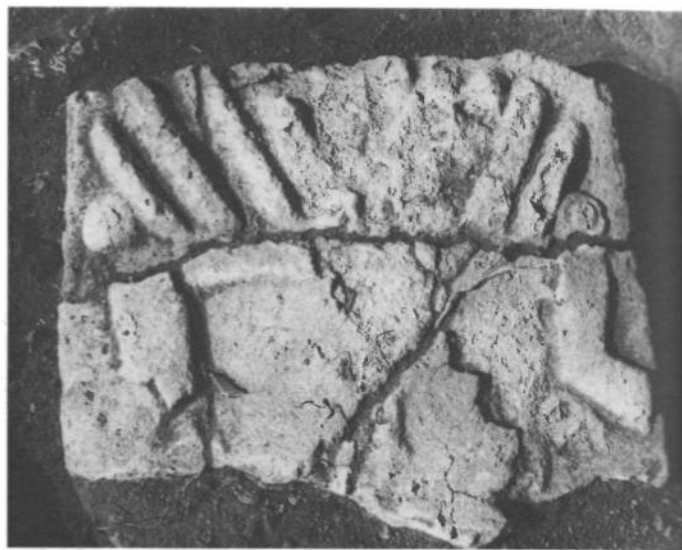


Fig. 8 Relief sculpture, Platform 1, La Mesa (42 cm wide.).

Teotihuacan compounds. Patios as a central concept in residential planning seem to be completely absent at La Mesa.

On the other hand, the presence of “Toltec small stone” wall facades (Fig. 7) almost surely constitutes a prototype for this technique at Tula in later times. The only difference between the two cases is that La Mesa builders generally used tabular basalt instead of limestone or *tepetate*. This same type of facade construction is also present in Corral phase contexts at Tula Chico (Cobean 1982: 40). Wall

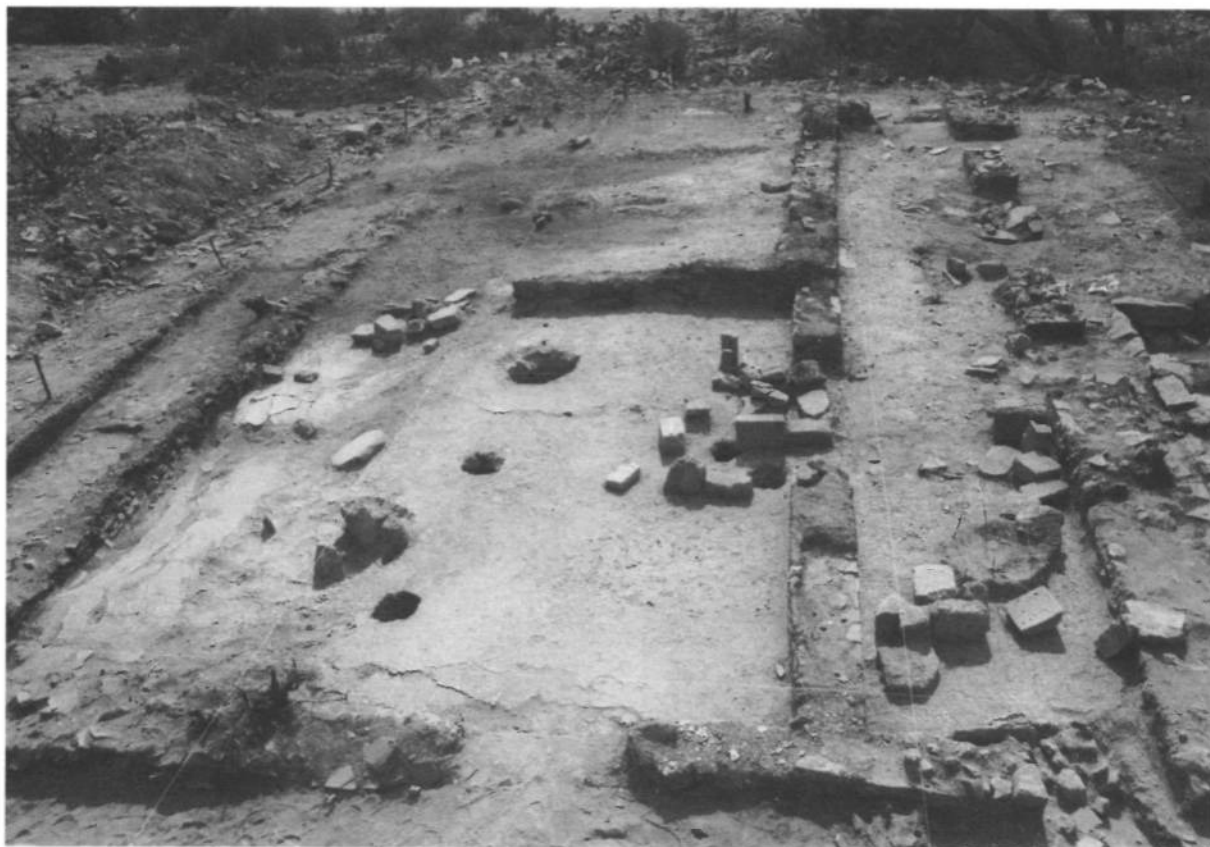


Fig. 9 Detail of Platform 1, La Mesa.

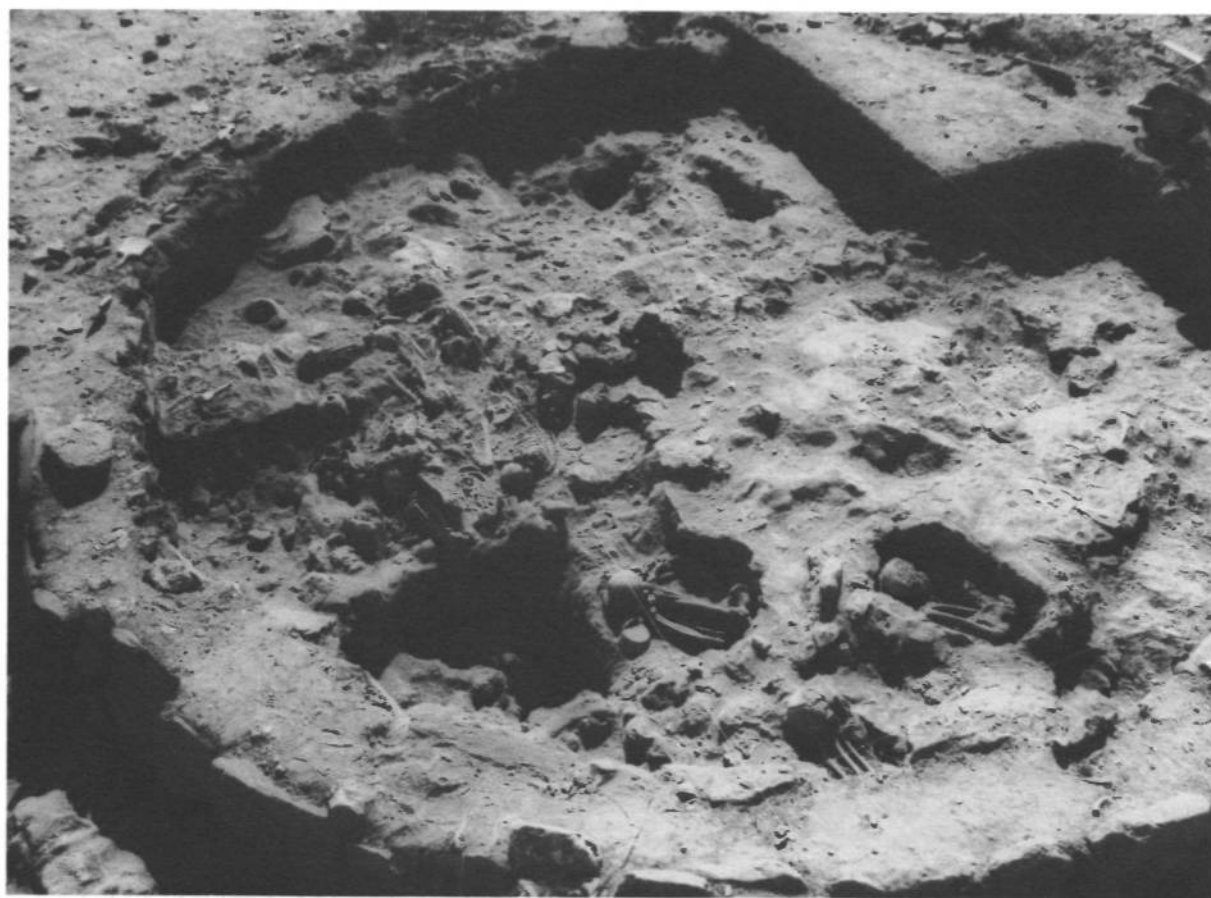


Fig. 10 Burials in Circular Structure 1, La Mesa.

construction involving tabular stone blocks probably was introduced into the Tula area from the north where similar techniques were employed at San Bartolo, Guanajuato (Castañeda n.d.); Toluquilla and Las Ranas, Queretaro (Marquina 1964: 239–242); La Quemada, Zacatecas (Kelley 1971: 774–777); and other sites.

La Mesa also contains carved limestone relief sculptures similar to Early Post-Classic art at Tula. The most complete example is a panel (Fig. 8) found beneath building rubble on the north side of platform 1. It may have adorned the exterior wall of that structure. The depiction appears to be that of a headdress similar to those on the Tlauhizcalpantecuhli figures on the exterior of Pyramid B at Tula (Acosta 1945: 32–34, fig. 19; Diehl 1983: 61). Two elements that resemble animal feet occur beneath the headdress, and two circular motifs, which may be eyes, frame it. The series of oblong elements that decorate the upper part of the headdress are formed more like ears of corn than feathers, which suggests that this panel may depict a version of Centeotl, the maize god (Michael Coe, personal communication, 1986). Fragments of carved limestone panels also have been recovered at Tula Chico; these include a panel depicting feathers, found on the surface of the main plaza, and several small fragments of reliefs with voluted and other curvilinear designs recovered in excavations from pure Coyotlatelco middens in a ball court near the plaza (Cobean 1982: 40–41, fig. 31). These examples of Coyotlatelco art suggest that at least part of Tula's Early Post-Classic iconography originated in the earlier Coyotlatelco populations.

Erosion has destroyed most of the floor of the completely excavated circular structure (circular structure 1, Fig. 2) and exposed its tabular basalt foundation stones (Fig. 10). More than twenty complete human burials appeared under the destroyed floors. The majority were adult skeletons. Most burials contained offerings, including complete vessels, obsidian knives, freshly struck prismatic blades, projectile points, scrapers or hoe blades, and a few pieces of worked bone and shell. There is little evidence for social stratification in the burial assemblage. Most offerings consisted of only one or two objects. There are no elaborate tombs; bodies were placed in holes excavated into the rubble or in simple cists constructed on the bedrock. The largest offering placed with any individual included two large projectile points, one large prismatic blade, and two finely incised earspools.

Many of the burial offerings consisted of objects used in daily life, particularly the ceramic vessels, worn scrapers, and used hoe blades. In contrast, the obsidian offerings appear to be "luxury" goods rather than utilitarian tools in view of the scarcity of obsidian at La Mesa and other hilltop sites. Obsidian burial offerings include unusually long bifaces (probably knives and projectile points) and freshly struck prismatic blades. The bifaces often exceed 10 cm in length, and some blades approach 20 cm. These implements are much larger than those found in refuse at La Mesa and show no evidence of use. The large prismatic blades certainly were not local products, and in fact there

are no cores or other evidence to suggest that prismatic blades were manufactured at La Mesa.

Most of the larger circular structures at La Mesa probably served as residences or kitchens. The three examples we excavated contained trash middens with kitchen debris, and the single example with an intact floor had a cooking hearth near the center. The smaller circular structures (with diameters from 1–2 m) may have served as granaries (Fig. 2).

We do not know why there were two house forms at La Mesa. Chronological differences do not seem to account for them, and it seems doubtful that they represent two different ethnic groups. We suspect that circular structures were functionally integrated with rectangular buildings and that the basic La Mesa residential complex included a rectangular building and one or more circular structures.

Circular buildings, especially circular residences, are rare in Central Mexico. The origins of the Tula area examples may be traced to the northern periphery of Mesoamerica where round Classic period constructions are known from the Huasteca (Stresser-Pean 1971: 589) and Jalisco (Weigand 1979). A large number of circular residences with foundations similar to those of the La Mesa round buildings are reported by Mountjoy (1982: 229) from the area of Tomatlan, Jalisco. Hers (1976: 42–43; personal communication, 1986) has found numerous examples of round residences at Classic period sites surveyed by the Belgian archaeological mission in the Sierra de Nayar of Jalisco and Zacatecas (Deltour n.d.). In eastern Guanajuato there are Classic circular buildings near San Miguel de Allende (Luis Felipe Nieto and Beatriz Braniff, personal communication, 1986).

Virtually all the ceramics at La Mesa appear to pertain to a Coyotlatelco complex that is closer to Classic period pottery in Bajío than are the Coyotlatelco ceramics at Tula Chico. The collections seem to contain materials from only one phase or complex, and we believe that the excavated structures were only occupied for a few generations at most. Certainly none of them show evidence for extensive modifications or rebuilding. Furthermore, all appear to have rather simple stratigraphies.

Members of our project systematically surveyed several sections of La Mesa in an attempt to identify lithic workshops and other specialized activity areas (Jackson n.d.). Although we identified numerous small production zones in various sectors of the site, large lithic workshops were not found. The major tool types produced in the small production zones included scrapers, retouched blades, and flakes. The principal raw material consisted of blocks and cobbles from the massive basalt formation that covers most of the hilltop.

We suspect that many of the basalt tools were used to process maguey fibers and produce pulque. Many of the terraces contain numerous thick olla fragments associated with the basalt scrapers. The ollas probably were used to store *aguamiel*, the unfermented maguey sap. While basalt tools dominate the assemblage, rhyolite, chert, and obsidian tools are also found. The first two were probably made locally, but the few obsidian blades, knives, and projectile points must have been imported as finished products.

Magoni

Magoni is the largest Coyotlatelco hilltop settlement in the area. It occupies the crest and high slopes of Cerro Magoni, a large hill composed of huge rhyolitic tuff flows capped in areas by basalt formations. It is located near the northwestern limits of Tula de Allende between the Tula and Rosas rivers, two of the most important rivers in the region (Fig. 1). The archaeological site covers almost 4 km². It contains a ceremonial-administrative zone which includes two separate plazas surrounded by pyramids and palacelike structures.

Despite its large area, we do not consider Magoni an urban community in light of its apparent low population density and limited socioeconomic complexity. Most of Magoni consists of terrace systems which seem to have served both residential and agricultural functions. These terraces are much more extensive than at La Mesa, extending for kilometers along the entire length of the hill down to its lower western slopes. Many wall stubs and building foundations are exposed on the terrace surfaces.

The majority of the residences appear to be square or rectangular platforms similar to those at La Mesa. We have not been able to identify any circular buildings at Magoni.

Rhyolite scrapers and thick-walled Coyotlatelco olla fragments which correspond to Cobean's (n.d.: 350-359) La Luz Smoothed Brown and Canones Red-on-Brown are common on the terrace surfaces. The terraces also contain smaller quantities of Coyotlatelco Red-on-Brown and other pottery types, manos, metates, basalt tools, worked bone, and shell. Occasional figurine fragments appear to represent three different traditions; the majority are in a Coyotlatelco style similar to that in the Basin of Mexico (Rattray 1966: 130-146), but others resemble Classic period West Mexican figurines (Meighan 1976: 70, 342), especially in terms of incised and appliqued designs. There also are several figurines in almost pure Classic Teotihuacan style (Figs. 15-20).

Magoni has substantial evidence of quarries and lithic workshops (Rees n.d.). A massive rhyolite formation high on the eastern slopes of the mountain contains large Coyotlatelco period quarries in three different zones. Raw materials were extracted from the quarries with basalt and rhyolite hammerstones. Large blocks of good quality rhyolite were then knapped into cores of several forms. Both the extraction processes and block reduction left great quantities of knapping debris at the quarries. This is the largest, most specialized lithics production complex in the region during the Coyotlatelco period.

An extensive workshop zone north of the quarries contains debris from every production stage used to reduce the rhyolite cores to scrapers and other implements (Fig. 11). The scrapers probably were multipurpose implements used in maguey fiber manufacture, pulque production, and other tasks. Many of the scrapers have lateral notches like the one in Figure 11. These notches generally have well-defined wear patterns and probably were used for separating and cutting maguey fibers.

The largest rhyolite quarry at Magoni covers nearly 2

hectares (Rees n.d.: map 2) and contains hundreds of thousands of flakes and other kinds of knapping debris. One of our initial interpretations of this quarry complex was that it might have been the major supplier of rhyolite tools for the other Coyotlatelco settlements in the region, but the subsequent surveys and excavations at other sites (Rees n.d.: map 2; Jackson n.d.) showed that the Tula area Coyotlatelco sites have their own raw material sources and workshops for producing stone tools, and it appears that the rhyolite tools from the Magoni quarry complex were not distributed to other communities. Magoni was the largest and most complex Coyotlatelco hilltop settlement in the Tula area and may have been Tula Chico's direct predecessor. Magoni's socioeconomic complexity, which exceeds that of other settlements during the same period, presages the rise of institutions that develop more fully soon afterward.

Tula Chico

Tula Chico's main plaza and densest occupation zone are located one kilometer east of Cerro Magoni on a low hill overlooking the Tula River (Fig. 1). It differs significantly from other Coyotlatelco sites in the region and is the only one that can be considered urban. The evidence for this includes its size (5-6 km²), large population, orientation of buildings to a uniform grid (Fig. 4), and postulated complex internal socioeconomic structure.

The main plaza is larger and more complex than that of any other Coyotlatelco settlement in the area (Fig. 3) and includes at least two ball courts, several kinds of pyramids, and large elite residential platforms similar to Tollan phase "palaces" at Tula Grande (Figs. 12-14). Taken together, these features suggest a high degree of social stratification. Nearby low hills contain small Coyotlatelco settlements which may have been functionally integrated into the Tula Chico community. The possibility of a second Coyotla-

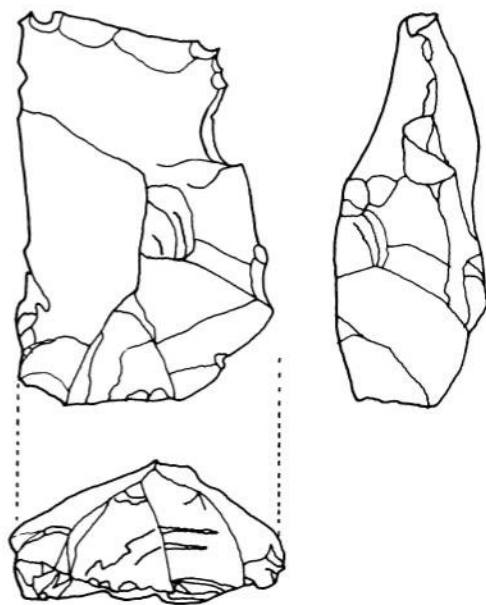


Fig. 11 Typical rhyolite scraper from the workshop complex at Cerro El Magoni, Hidalgo.



Fig. 12 The plaza of Tula Chico with the unexcavated main pyramids in the background. Looking northwest.



Fig. 13 The plaza of Tula Chico with an unexcavated palace platform and a pyramid in the background. Looking north.

telco civic precinct under or near the later Tula Grande precinct is suggested by the fact that terraces near the complex conform to the Tula Chico orientation (Mastache and Crespo 1982: 23). The fact that Acosta (1945: 51–53) found Coyotlatelco ceramics beneath a number of structures in and near the plaza is additional evidence for this early occupation at Tula Grande.

Tula Chico exhibits a much higher order of community planning than any of its contemporaries. A uniform grid pattern integrated its administrative-religious precinct, the densely settled residential zone around the precinct, and the dispersed smaller settlements on neighboring hills (Fig. 4). This grid pattern, oriented almost exactly north-south (based on magnetic north), was discovered by Mastache and Crespo (1982) during their survey of Tula's urban zone. The uniform orientation was first identified on aerial photographs and then verified in the field at a number of points in the urban zone. Constructions with a north-south orientation include terraces, platforms for buildings, and exposed walls of some large structures along with the Tula Chico plaza and parts of Tula Grande. We believe that this standard orientation, indicative of a well-developed level of sociopolitical integration, was the beginning of urban planning at Tula.



Fig. 14 A fragment of a carved limestone panel depicting feathers found on the surface of the main plaza at Tula Chico.



Fig. 15 Late Classic figurine from Tula Chico (3.8 cm wide).

Our surveys and excavations clearly indicate that Tula Chico had a more complex economy and more long-distance trade than other Coyotlatelco sites in the region. It contains proportionally more obsidian and fewer rhyolite and basalt tools than other sites. Color differences in the obsidian suggest that Tula Chico drew upon at least three distinct source areas. Small amounts of Veracruz wares and other foreign ceramics have been identified, suggesting that Tula Chico received trade goods not found at other sites (Cobean 1982: figs. 6–8). The relative lack of scrapers, hoe blades, and ollas seems to suggest that Tula Chico's economy was less directly involved with agricultural production than La Mesa.

We have proposed that Tula Chico was settled by people who moved down from the hilltop settlements and rem-



Fig. 16 Teotihuacan style figurine recovered in the Tula Chico excavations (3.2 cm wide). See Cobean (1982: 52–54, foto 34).



Fig. 17 Figurine from La Mesa, Hidalgo (3.8 cm wide).



Fig. 18 Figurine from La Mesa, Hidalgo (3.3 cm wide).



Fig. 19 Figurine from La Mesa, Hidalgo (3.2 cm wide).



Fig. 20 Figurine from La Mesa, Hidalgo (2.1 cm wide).

nants of the Teotihuacan-related population. If this is correct, its initial growth may have been an explosive episode which quickly concentrated many of the region's inhabitants in the new center. This small city clearly constituted the first stage of the later Tollan phase metropolis. It was not so much Tula Chico's size that differentiated it from other settlements in the area but rather its social, economic, and political complexity. In a similar vein, the uniform orientation of its structures is important from the perspective of urban planning, but even more important, as an expression of basic concepts of spatial organization according to the specific ideology and world view of a Mesoamerican state (Mastache and Cobean 1985: 280; Benson and Coe 1981).

Although most of the Coyotlatelco habitation areas at Tula continued to be occupied in Tollan phase times, the Tula Chico main plaza was completely abandoned despite

its location within a thriving city. The reasons for this are not known, but ethnohistorical accounts of the Tula and the Toltecs provide the basis for one explanation. We believe that the plaza was left unoccupied as a monument or permanent testimony to a great political or religious conflict that took place there (Mastache and Crespo 1982: 32–33; Stocker n.d.: 154, 271). Legendary accounts of Toltec history describe a series of epic struggles between the followers of Ce Acatl Topiltzin Quetzalcoatl and Tezcatlipoca. These conflicts ended with the expulsion of Quetzalcoatl and his group from Tula (Nicholson n.d.: 305; Davies 1977: 70–74). Tula Chico's abandonment and the subsequent transformation of the city, including the adoption of a new grid orientation, may be a reflection of this conflict and the defeat of Quetzalcoatl (Mastache and Crespo 1982: 32–33).

Despite the evidence for major cultural changes and internal conflicts at the end of the Coyotlatelco period, the two major civic precincts of Tula Chico and Tula Grande share many similarities. Both have similar ground-plans with analogous structures in the same relative locations. In addition, the construction techniques employed at both are very similar and include "Toltec small stone" wall facades. Ball courts and palace structures occupy the same locations in both complexes. Older preliminary maps of Tula Chico indicated that major pyramids were placed at identical locations in both plazas (Matos 1974: fig. 2; Cobean 1982: fig. 2), but our recent, more accurate map shows that Tula Chico's two major pyramids were adjacent to each other on one side of the plaza (Fig. 3), whereas Pyramids B and C at Tula Grande form a 90 degree angle on adjacent sides of the plaza.

Much remains to be learned about these two plazas. Mesoamerican ceremonial centers were concrete expressions of political and religious power. Detailed comparisons of Tula Chico and Tula Grande should provide a wealth of information on the manner in which they functioned during their respective periods of occupation and the roles they played in the origins of the Toltec state (Mastache and Cobean 1985: 283). It would be especially important to excavate the main palacelike structures in both plazas in order to reconstruct the social and economic organizations of the ruling groups at different periods during the city's life.

We know very little about the ethnic composition of Tula Chico's population. The two ethnic groups that we have attempted to identify in the archaeological record may possibly correspond to groups mentioned in the chronicles. The "Tolteca-chichimecas" may be the northern group that we relate to the Bajío, while the "Nonoalca" may have been the Teotihuacan-related remnants described in the sixteenth-century histories as the founders of Tula (Jiménez Moreno 1941: 81). The Otomi, longtime inhabitants of the Tula region and the Teotlalpan, were certainly an important ethnic group in the Tula Chico population (Carrasco 1950: 244–247; Cobean n.d.: 76). Carrasco considers that at least some of the Chichimeca at Tula were Otomi.

Tula Chico's sphere of political and economic influence is difficult to reconstruct. We believe that it did not extend

very far beyond Tula's immediate hinterland. Its competitors would have included other Coyotlatelco sites of comparable size in the Basin of Mexico (Sanders et al. 1979: 129–137; Diehl, this volume) and sites such as Xochicalco (Armillas 1964: 312; Litvak King 1970: 131; Hirth 1984, this volume), Teotenango (Piña Chan 1975), and Cacaxtla (García Cook 1981: 269). We lack radiocarbon dates for Tula Chico, but based on comparisons with the ceramic chronologies for the region and the Basin of Mexico, we think that Tula Chico's period of maximum expansion was ca. A.D. 800.

CONCLUSIONS: THE ORIGINS OF THE TOLTEC STATE

Here we will not consider in any detail the theoretical problems involved with the definition and nature of the early state. In our analysis of Tula as an example of an early state (Mastache and Cobean 1985: 284–286) we have used the following general concepts: The state necessarily consists of a society divided in classes, with a centralized power belonging to a group or governing class which organizes the society and is placed above the rest of that society, controlling production, distribution, and consumption. Other basic attributes of the state include territoriality and a highly developed religion which organizes the thought and worldview of the people and is the principal mechanism of ideological control through which the political-economic system is morally legitimized. The state, in addition, involves the existence of physically coercive institutions such as militarism.

Using the above cited attributes as criteria for sociopolitical analysis, the processes of state development in the Tula region form a complex pattern. The region clearly was part of the Teotihuacan state during the Early Classic, but the center of this state was located outside the Tula area, at the enormous metropolis in the Basin of Mexico.

During the decline of Teotihuacan, the Coyotlatelco culture emerged in the Tula region. The initial Coyotlatelco settlements, however, did not constitute and were not part of a state. At least in the hilltop Coyotlatelco sites there is little to suggest the existence of social classes. Among these settlements there is no one large center that clearly dominated and controlled the entire area. As described previously, it is more likely that most of the hilltop Coyotlatelco sites were independent political and economic units. A number of these sites, such as La Mesa and Magoni, have more than one plaza or ceremonial-administrative precinct. This may indicate that political and economic organization was not very centralized or differentiated even within these settlements, possibly with each plaza being the "control center" for a different elite group or lineage. In terms of social and economic complexity, the hilltop Coyotlatelco sites appear to constitute a transitional status between egalitarian societies and the state. These settlements possess some degree of socioeconomic stratification but lack developed classes and other complex social, economic, and political institutions that are present in early states (Claessen and Skalkin 1978: 22–24).

Tula Chico's small Coyotlatelco city or "proto-city"

obviously was more complex both socially and economically than the hilltop Coyotlatelco sites, but was it really a state? It is clear that a key process in the origins of the Toltec state began with the founding of Tula Chico and the expansion of its settlement. Considerably more investigation needs to be done, however, before we can know much in detail about the social, economic, and political complexity of Tula Chico. For example, except for the presence of large palacelike platforms on the main plaza, and the fact that its size and complexity probably are sufficient for it to be considered "urban," Tula Chico possesses only limited specific evidence for the existence of social classes.

An intensive program of excavating residences at Tula Chico would greatly clarify this problem. Healan (n.d.) and others have identified a series of different residence types in Tula's Tollan phase city which probably correlate well with distinct social classes (Mastache and Cobean, 1985: 286-287). It is possible that there also existed a "stratification" of Coyotlatelco residence types at Tula Chico. A more speculative proposal concerning social complexity is inherent in our discussion here of the possible correlation between the abandonment of Tula Chico's plaza and the legendary struggle between the followers of Quetzalcoatl and Tezcatlipoca. If this conflict took place at Tula Chico, then it was the founding center for the Toltec royal dynasty.

From the limited information that we now possess, only very general conclusions can be made concerning the origins of the Toltec state: there was very little direct continuity between Early Classic Teotihuacan and the beginnings of Tula. In addition, many of the key processes in the development of the Toltec state began in the Tula region Coyotlatelco populations, at least some of whom probably were people from the Bajío and the northern periphery of Mesoamerica. Future studies of state formation at Tula should consist of investigations concerning the central processes involved in the collapse of Teotihuacan and the possible roles that the Teotihuacan cultural tradition played in the rise of Tula, along with more detailed analyses of the specific characteristics of the Coyotlatelco people, their origins, cultural relationships, and exact chronology. This research entails large-scale surveys and excavations not only in the Tula region but also in the Bajío, the Zacatecas-Jalisco border area, and other northern regions where a number of the cultural traditions that produced the Toltec state probably originated.

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Militarism and Social Organization at Xochicalco, Morelos

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INTRODUCTION

THE EPICLASSIC PERIOD (A.D. 650–900) is one of the most important and least understood periods in Central Mexican prehistory. It was important because it marked a series of broad social and political changes within areas formerly under Teotihuacan control. New cultural traditions emerged, and independent state-level societies appeared and flourished in many areas of the central highlands. The appearance of new state systems heightened the competition for scarce resources, resulting in an increase in state-sponsored militarism both within Central Mexico and beyond.

One of the concerns of this paper is to examine the evidence for, and importance of, state-sponsored militarism in structuring Epiclassic society. Studies examining the topic have used diverse data ranging from settlement patterns and artistic evidence to ethnohistoric references (Blanton 1975; Nicholson 1960; Jiménez Moreno 1966; Webb 1978). Although Epiclassic militarism is frequently alluded to, it is rarely discussed in terms of individual societies at specific points in time. This study takes a different perspective: it focuses specifically on the role and importance of militarism in the organization of Epiclassic society at Xochicalco.

Xochicalco is located in western Morelos (Fig. 1) and was one of the first independent urban centers to appear during the Epiclassic period. Although its militaristic characteristics have been discussed by numerous researchers and travelers visiting the site (Togno 1903; Armillas 1951; Litvak King 1971), recent studies have tended to emphasize its mercantile (Litvak King 1970) and religious (Piña Chan 1977) functions over its political ones. I begin, therefore, by examining and summarizing the available evidence for militarism in Xochicalco. This task is fundamental to identifying the presence of military activity and reconstructing the size, composition, and organization of its corresponding social and political units. Once this is accomplished it will be possible to examine the organizational structure of the Xochicalco polity.

Although warfare is a condition of political relations, evidence for conflict by itself does not specify how warfare was organized or used in structuring social relationships within competing societies. For example, despite a number

of excellent studies documenting militaristic themes in the Middle Horizon art and iconography of Teotihuacan (Millon 1973; Pasztory 1974; Berlo 1983) and Monte Alban (Marcus 1983), we still lack a comprehensive understanding of the role of militarism in the structure, growth, and maintenance of the early states. The key issue in Central Mexico is how the early state was organized in Teotihuacan. Unresolved is whether the militaristic themes found at Teotihuacan reflect its organization as conquest state, the operation of armed merchant groups (Berlo 1983), or the appearance of warrior societies/sodalities alongside local militias organized through kinship and community lines. This study examines the role of militarism during the Epiclassic for which the documentary evidence is both more abundant and more specific in meaning.

The question to be addressed is whether the growth of Xochicalco as a political center was linked to the appearance of state-dependent military sodalities. It is becoming increasingly clear that Epiclassic societies were organized in a way analogous to the Late Horizon conquest states. Intergroup warfare was a condition of the times and was important in structuring the social, economic, and political aspects of society. The data suggest that political systems grew through military conquest and that tribute was extracted from conquered provinces to support an administrative elite. Warrior societies were present and appear to have been characterized by both the internal stratification and upward social mobility found among the *quauhipiltzin* of the Late Horizon Mexico. Religious themes suggest the presence of the human sacrifice/god nourishment complex which legitimized the role and social position of warrior sodalities (*quauhipiltzin*) within the society. The significance of the warrior societies is that they cut across social classes and allowed the acquisition of status and rewards for service to the state.

This paper concludes with a few brief comments on the size of the Xochicalco state. More important, I attempt to show that Central Mexico was divided sharply into several competing political and economic systems during the Epiclassic. Political competition is reflected in the limited economic interaction between these systems which are differentiated from one another by their regionally distinct archaeological assemblages. Western Morelos was clearly

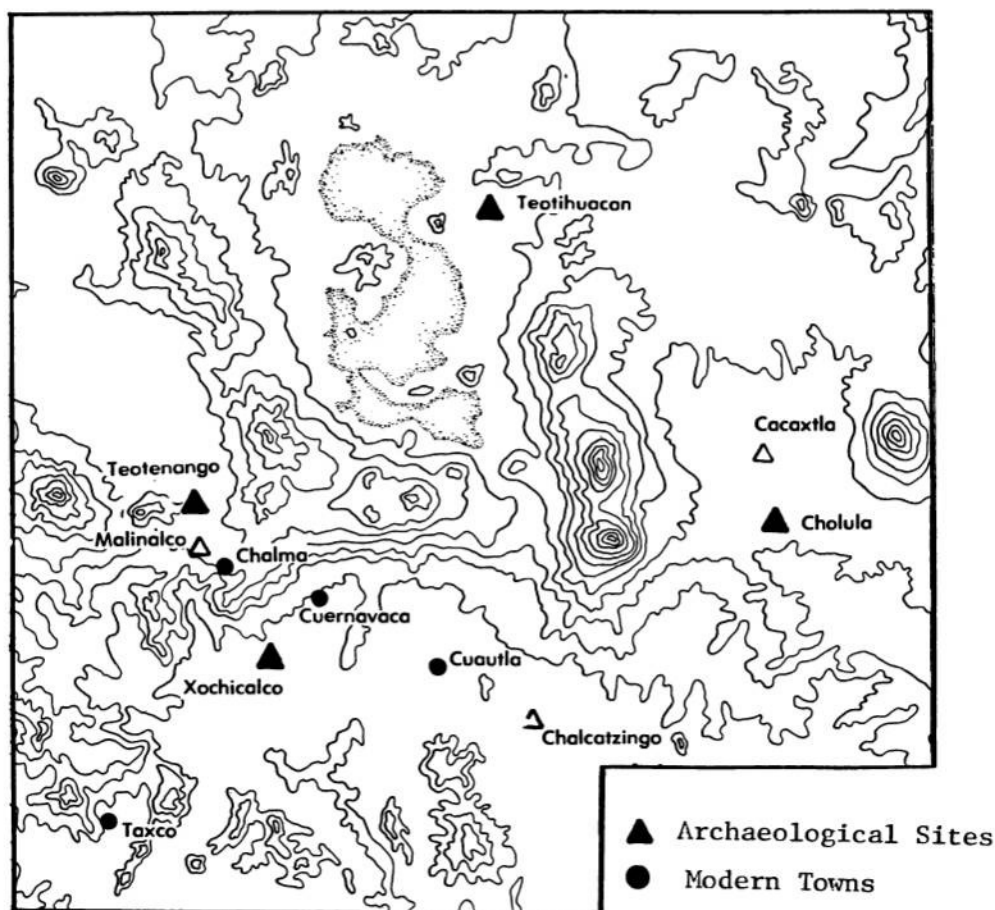


Fig. 1 Location of important archaeological sites mentioned in the text.

outside of the Valley of Mexico economic sphere; this suggests that Xochicalco was an independent and active competitor of Teotihuacan and other centers throughout the valley's southern lakes region.

EVIDENCE FOR MILITARISM IN ARCHITECTURE AND SETTLEMENT PATTERNS

Xochicalco is located on a hilltop 15 km southwest of the modern town of Cuernavaca. Its hilltop location has prompted comments about the militaristic character of the site by many of its early visitors. Alzate y Ramirez (1791) described the site's defensive architecture and characterized it as a military fortress as early as 1777. Togno (1903) believed that Xochicalco's internal organizational design was an early version of the polygonal fortress plan used during the nineteenth century throughout Europe. In 1978 the Xochicalco Mapping Project was initiated to study the development of urban-state political systems in western Morelos. Since that time the project has assembled quite a variety of data reflecting militarism, including defensive fortifications, the internal organization of the Xochicalco site, the configuration of regional settlement patterns, iconographic themes portrayed on stone sculpture, and the occurrence of artifact classes specifically associated with the practice of human sacrifice.

Intensive reconnaissance of Cerro Xochicalco has sup-

ported earlier suggestions that the site was constructed as a fortified urban precinct. Barrier walls, ramparts, dry moats, and trenches were mapped. On the basis of their size and location, these appear to be defensive features. Barrier walls and ramparts vary from 2–4 m in height and are usually found together with a dry moat or trench. Moats and trenches are equally formidable and are cut directly into the bedrock up to 3 m in depth.

The distribution of these architectural features (Fig. 2) reveals several interesting characteristics about defensive strategy during the Epiclassic. First, Xochicalco's primary defenses were provided by its hilltop location and the long terraces and platforms that have downslope facades from 3–5 m in height. Walls and moats were constructed as supplementary defenses which, together with interconnecting terraces and platforms, provide a formidable barrier around the base of the hill. Second, these supplementary constructions did not create a continuous defensive perimeter around the entire site. Although the lower portions of Cerro Xochicalco were fortified with ditches and ramparts on its southern and eastern flanks, these constructions end where the slope steepens and the terrain provides some natural defense for the site occupants. Even though a discontinuous defensive perimeter would be ineffective against a western military strategy, this is precisely what some early conquistadors describe as a tactical feature of

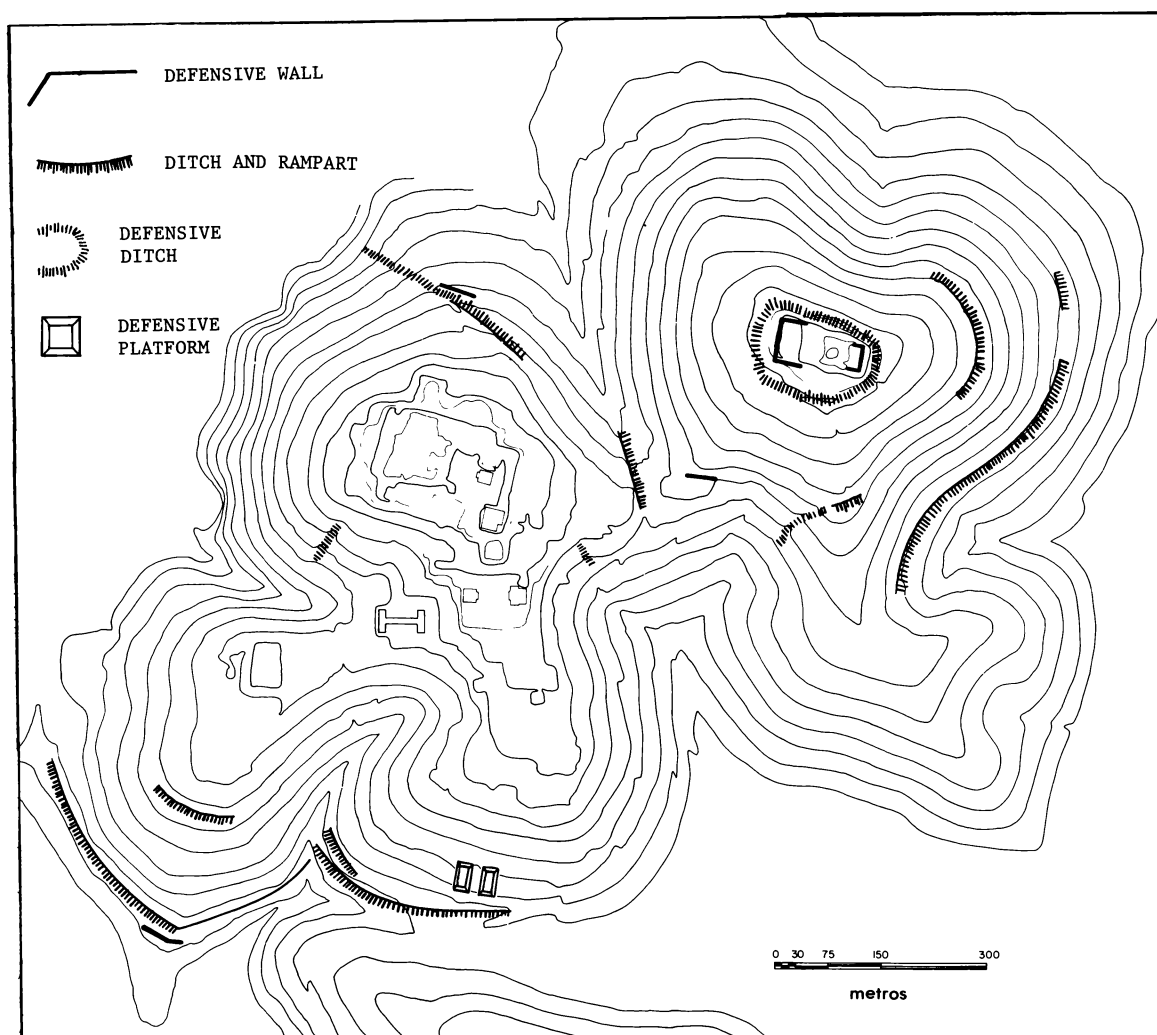


Fig. 2 Distribution of defensive architecture at Xochicalco, Morelos.

Pre-Hispanic warfare in some areas of Mesoamerica (Dávila in Chamberlain 1948: 114).

An important characteristic of Xochicalco's organizational design is that it provided site occupants with a multiple series of internal defensive perimeters. These perimeters were created by constructing long terraces with steep downslope facades in a series of concentric bands extending up the slope of the hill. The occurrence of fortifications with several of these internal perimeters provides proof that the concentric terrace arrangement was designed specifically for defense. Freestanding defensive walls were incorporated into the internal defenses to bolster the downslope edge of terraces (T14 and T8) and to enclose separate precincts (Plaza Ceremonial). Trenches were also used on the North Hill to divide the site into horizontal rather than vertical segments. It is possible that some of the internal defensive perimeters were established along the boundaries between barrios or other social divisions within the site.

Division of the site into multiple concentric compartments was a practical defensive strategy. Access between them was restricted by a series of paved ramps or accessways which ascended the hillside in specific locales.

Accessways were the weakest part of the concentric design and were defended by large flanking platforms where they crossed internal site segments. While the main purpose of these accessways was to restrict vertical movement throughout the site, many were enclosed on both sides by masonry walls which increased the horizontal dissection of the site into pie-shaped segments.

Another interesting characteristic of the region's Epiclassic defensive architecture is that a great deal of effort was invested in fortifying small precincts within one kilometer of the major defensive perimeter of Cerro Xochicalco. Six small civic-ceremonial precincts identified by the Mapping Project (La Bodega, La Silla, Temascal, La Fosa, La Maqueta, Tlacuatzingo) are fortified with a combination of moats, ramparts, walls, and platforms. This is surprising not only because of their proximity to the Cerro Xochicalco defenses but also because four of the six precincts appear to have been special-purpose zones with little or no associated residential habitation. I believe that these precincts were the fortified retreats of groups residing in the outlying hinterland surrounding Xochicalco. A similar, although not identical, situation is recorded for Utatlan, Guatemala, where major lineage heads maintained a palace

complex in the urban center while their vassals and clansmen resided in the surrounding rural areas (Carmack 1981). In a similar vein, the village of Tlacuatzingo and the more distant community at Cerro Jumil constructed their own defenses rather than relying on those of Cerro Xochicalco. The presence of multiple defensive precincts perhaps reflects a segmented social system where individual communities maintained a high degree of internal autonomy but were linked in a mutually beneficial political league under the hegemony of the Xochicalco elite.

Regional settlement survey of 250 km² in the Coatlan region has provided useful information on changing demographic relationships in an area 12 km southwest of Xochicalco. During the Classic period preceding Xochicalco's rise to power, the Coatlan region was characterized by a poorly developed settlement hierarchy. The majority of the population was dispersed throughout small hamlets located alongside good agricultural land. Small villages provided the primary social and administrative functions for dispersed groups throughout the region (Hirth and Angulo 1981: fig. 4). These villages averaged 100–200 persons in size and rarely contain civic-ceremonial structures greater than 2 m in height. The area has moderately weak cultural linkages with the Valley of Mexico; Teotihuacan culture is not strongly reflected in either ceramic or architectural assemblages except at the site of Miahuatlan (RCT-133) located along the Amacusac River. Miahuatlan was the only large Classic period site located in the Coatlan region and may have been an important regional administrative center and outpost for trade leading south into Guerrero and beyond to the Pacific coast.

During the Epiclassic several significant changes occurred in the settlement patterns throughout the Coatlan region

which may be related to increased militarism and the integration of rural populations under Xochicalco's political control. First, there was a clear trend of nucleating population into fewer but larger sites in good agricultural zones. Second, the location of village communities with ceremonial architecture shifted from the valley floor to defensible locales on hills and ridgetops overlooking the alluvial bottoms. The construction of terraces was the principal means of fortifying the large hilltop sites of Coatlan del Rio (RCT-1) and Miahuatlan Pueblo (RCT-119). No auxiliary defensive features, such as moats, ramparts, or defensive walls, were identified throughout the region. It is likely that Xochicalco and its associated fortified precincts provided the strategic defenses for groups in western Morelos.

XOCHICALCO MILITARISM: ART AND ARTIFACTS

Some of the best information on militarism is that portrayed on the carved stone monuments located in the Plaza Ceremonial on the summit of Cerro Xochicalco. The best known of these monuments is the Pyramid of the Plumed Serpent (Fig. 3) whose carved surfaces contain a variety of liturgical, calendric, historic, and conquest information. The multiple messages depicted on the Pyramid of the Plumed Serpent are discussed by others in this volume (Nagao; Berlo, Chap. 2); it is only the militaristic themes that I am concerned with here.

Militarism in its simplest form is portrayed on the Pyramid of the Plumed Serpent as warriors arrayed in battle costume and carrying a shield and darts (Fig. 4a). Most of these figures are located on the masonry temple on the top of the pyramid which was already badly destroyed at the time of Leopoldo Batres' (1912) partial restoration in the



Fig. 3 The Pyramid of the Plumed Serpent, as seen from the southwest.

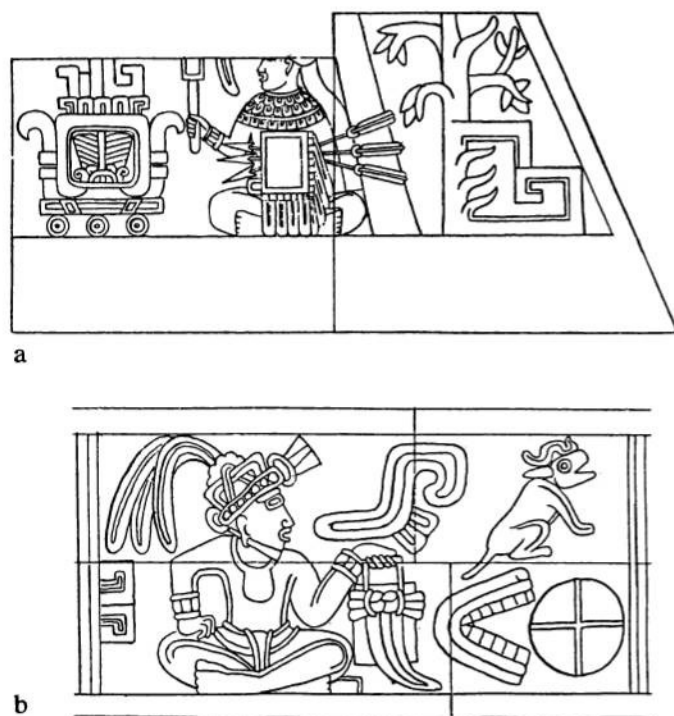


Fig. 4 Sculptural elements on the Pyramid of the Plumed Serpent: (a) warrior on the upper masonry temple, (b) *tablero* cluster of seated figure, devouring motif, and toponym. After Peñafiel 1890.

late nineteenth century. Twelve armed warriors are depicted on the exterior walls of this building. It once contained many additional figures, judging from the loose carvings scattered around the base of the monument which could not be repositioned in the upper facade. Warrior figures also occupy prominent locations on the sides of the stairway leading to the summit of the pyramid. Past interpretations of this monument have overlooked the frequency and location of warrior figures in favor of the better preserved and boldly depicted carvings on the base of the pyramid. There is no question that the Pyramid of the Plumed Serpent was one of the most spectacular and important temple structures at Xochicalco. The prevalence of warrior figures as the dominant theme in the upper temple decoration indicates that they had both a prominent social and ceremonial role in the society and suggests that they were either intricately related to the maintenance of cult deities or involved in the ritual associated with this important temple.

I believe that militaristic themes are also portrayed by the carvings on the *tablero* of the temple platform (Figs. 4b, 5). The recurrent theme across the *tablero* is a seated figure holding a bag or jar who faces an open mouth devouring a four-part circle with associated symbols (Fig. 4b). The *tablero* images frequently have been interpreted as conveying messages of religious significance (Peñafiel 1890; Noguera 1946; Piña Chan 1977). The seated figures have been interpreted as Tlaloc priests because of the circular goggles placed over their eyes and the presence of the year signs in their headdresses. Correspondingly, the jaws and circle associated with these priests have been interpreted

either as eclipse information (Noguera 1946; Angulo 1978: 24) in harmony with calendric notations on the structure's western *talud* or as a generalized depiction for the passage of time (Peñafiel 1890; Abadino 1910).

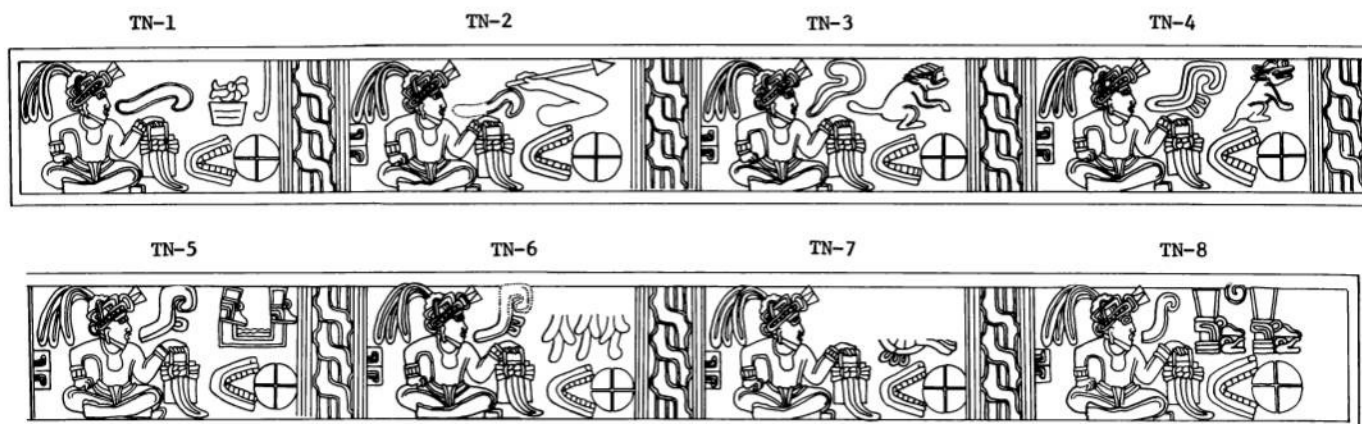
The alternative interpretation that I propose here is that the *tablero* element cluster depicts the three-part association of warrior, conquest, and tribute. I believe that the seated figures portrayed on the *tablero* depict warriors or members of a warrior cult rather than priests.¹ Individuals with similar costume elements are depicted clearly as warriors in the Battle Murals at Cacaxtla (Foncerrada de Molina 1982; Baird, this volume). Cacaxtla warriors wear the year sign motif in their headdresses and display Tlaloc imagery both in their belts and in the mask elements suspended in front of their faces. The year sign and facial Tlaloc imagery occur at Cacaxtla only within scenes of war and militarism and only then with the ornately embellished, most prominent, and presumably highest ranking members of the victorious group. This imagery is similar to that found at Teotihuacan where Pasztory (1974: 15) has observed that human figures associated with war and sacrifice are frequently portrayed with rings over their eyes. The seated *tablero* figures at Xochicalco are portrayed as speaking, so it is probable that the associated symbols are meant to be interpreted as the subject of their message. Similarly, Linda Schele and Mary Miller (1986: 177) have determined that the year sign head-dress and Tlaloc imagery (Millon 1973) were closely associated with warfare and human sacrifice on public monuments in the Maya region (see also Stone, this volume).

Immediately adjacent to the seated *tablero* figure is an open jaw devouring a four-part circle. I believe that this depiction is meant to be interpreted literally; that is, the jaws portray the action to eat, consume, or put inside. The four-part circle or *kan* sign in Mesoamerican epigraphy was often used to represent the idea of something precious (Thompson 1971: 275). I believe that the jaw and circle association is a hieroglyphic text portrayed in ideopictographic form. Since the seated figures are always depicted as speaking, the content of the message is "I eat or consume something precious" or, alternatively, "I put something precious inside." It is interesting that the Nahuatl verb meaning "to put something precious or valuable inside" is *calaquia* (Molina 1977). If the message was spoken in Nahuatl, the seated figure would have said *nitla, calaquia*. The word for tribute in Nahuatl is *tlacalaquilli*, and the verb to pay tribute is *nitlacaquia* (Molina 1977).

Located above the open jaw and four-part circle are a series of nonrepeating iconographic elements which have been interpreted as a form of calendric designation (Peñafiel 1890; Abadino 1910; Roque 1928). In an early article Leopoldo Batres (1886) suggested that some of these elements might properly be interpreted as the toponymic depictions of specific places. I favor this interpretation since the organization of the iconography is consistent with the

¹Although I have suggested that the figures represent warriors or members of a warrior cult, a compatible alternative would be that they represent a ruler arrayed in a warrior's regalia. I am not so much concerned with either the status or specific identity of the seated figures as I am with the fact that they contain elements indicative of militarism.

NORTH TABLERO



SOUTH TABLERO

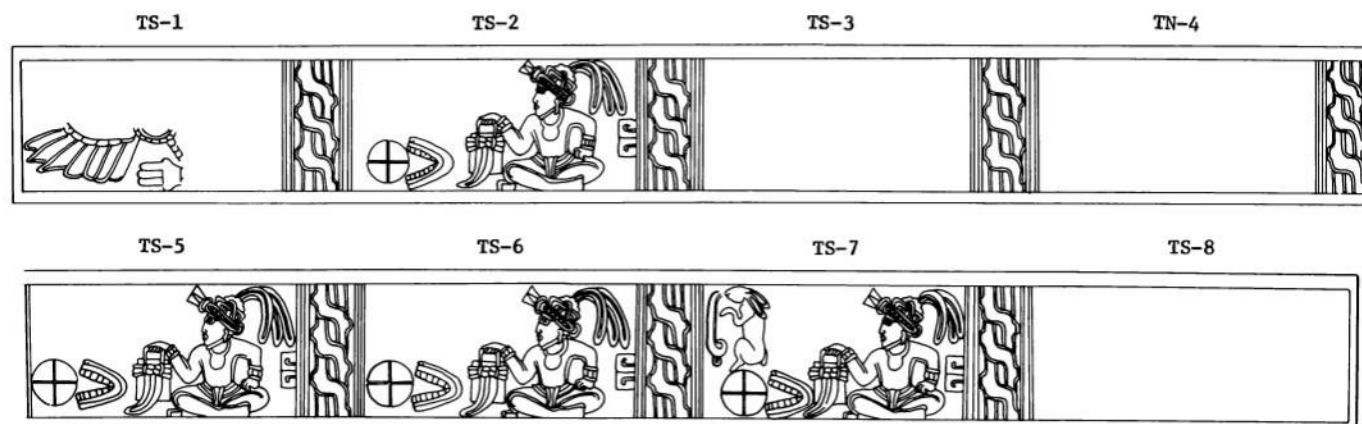


Fig. 5 Preserved sculptural elements on the north and south *tableros* of the Pyramid of the Plumed Serpent. Courtesy of Virginia Grady Smith.

principles of Nahuatl place name construction when using the picto-ideographic approach (Dibble 1971: 324; Peñafiel 1885). In the discussion that follows I use Nahuatl to decipher and propose place name equivalents for these toponyms. In doing this I would like to make two points clear. First, I do not mean to imply that the inhabitants of Xochicalco were necessarily Nahuatl speakers. Since place names referred to real things or actions, the meaning and symbolism of indigenous names were maintained despite the translation of the name into various languages. Second, what I want to demonstrate is that these *tablero* elements can be interpreted plausibly and logically as toponyms. I am *not* concerned with identifying or correlating these toponyms with *specific* places known from contact period sources. References to specific places or geographic regions are intended merely to illustrate a possible reading of the toponym.

Only seven of the original twenty-eight toponyms in the *tablero* register are complete enough to be read. Six of these are located on the north *tablero* where the late nineteenth-century photographs taken prior to Batres' reconstruction show the facade to be complete and well preserved (Saville

1928; Peñafiel 1890). The single remaining toponym is located on the pyramid's south *tablero*. Figure 5 illustrates these toponyms.²

Toponym TN-1 is located on the north *tablero* and is a carving of a flower (*xochitl*) accompanied by a curved bar or staff (*topilli*). If we presume an implied locational ending such as *can* (place of) or *tlan* (near, together), a possible translation for this toponym would be Xochitopilán (place of the flowered staff). The next toponym on the north *tablero* (TN-2) is a human arm holding or throwing a spear. Alternative translations for this could be Tlacochealco (place of the house of spears) or Miacatlan (abundant place of spears). This glyph may refer to the large Epiclassic site located on the hill overlooking the modern town of Miacatlan approximately 8 km southwest of Cerro Xochicalco.

²Illustrations of the *tablero* sculpture (Fig. 5) and the sculpted human monument (Fig. 7) were graciously provided by Virginia Grady Smith whose 1988 doctoral dissertation at the University of Kentucky provides a more detailed discussion of Xochicalco iconography. Renderings of the *tablero* sculpture were made by Ms. Smith using Peñafiel's original drawings, prerestoration photographs, and careful on-site study and photography of bas-relief carvings.

The third toponym on the north *tablero* (TN-3) portrays an iguana or lizard (*cuetzpallin*) which could be translated as Cuetzpallan (place of the iguana) or by dropping the "p" as Cuetzalan (green place, place of the quetzal birds).

Translation of toponym TN-4 is more secure because of its similarity with the depiction of some Aztec place names. The figure is that of a dog or coyote (*coyotl*) with a flourish or crest on its forehead. A literal translation for this toponym would be Coyoacan (place of the coyote). In the codices the toponym for Coyoacan was drawn simply as a coyote portrayed with a black spot (a double entendre with *coyotlic* meaning hole) painted on its side. Another way of translating Coyoacan is "place of the crest of the head of the coyote," as it was among the Otomi. Ecker (1940: 200) suggests that this was the ancient way of indicating Coyoacan, and it is what I believe is depicted here.³ It is possible that this toponym is meant to refer to the old town of Yacapixtlan in northeastern Morelos which was called Coyoacan (Chimalpahin 1965: 154) prior to its resettlement by the Tlacochealco during the late fourteenth or early fifteenth century.

Toponym TN-5 portrays two legs placed over the symbol for water. One of the legs is inclined inward to indicate action. I believe that this toponym is meant to be interpreted as a whole action, namely, to walk on or pass over water. The verb to cross a river is *pano*, while the noun for a river ford or water crossing is *panoayan*. The toponym can be translated directly as Panoayan (crossing over water), which may refer either to the archaeological site of Pantitlan near Huastepic in central Morelos or perhaps an unidentified Epiclassic town in the Amecameca area leading north into the Valley of Mexico which was known ethnohistorically as Panohuayan Amaquemecan (Chimalpahin 1965: 25).

The last undamaged toponym on the north *tablero* is TN-8 which displays human legs wearing a pair of elaborate sandals adorned with the heads of birds. These represent eagle sandals (*quauhcattli*) which were worn during the Postclassic period by royal or important personages. The flourish between the legs is interesting because the postfix *tlán* was used to signify "between" (Peñafiel 1885: 28). A logical translation for this toponym would be Quauhcattlan or Quauhcattlan, a possible reference to a town somewhere in eastern Morelos along the Rio Cuautla.

Only one toponym is complete enough to be read on the south *tablero*. Figure TS-7 portrays a rabbit (*tochtli*) depicted as singing or speaking. Several alternative interpretations can be given for this toponym. It can be interpreted as Tuchtlan (place of the rabbits) or Tuxpan (among the rabbits) by focusing on the rabbit representation. An alternative possibility is that the speech scroll (*cuicatl*) carries the major meaning in which case the toponym could be read as Cuicatlan. If the latter interpretation is taken, it may refer to a Cuicatenco town somewhere in the state of Oaxaca (Macazaga Ordoño 1978).

I would like to suggest that the main purpose of the *tablero* sculpture on the Pyramid of the Plumed Serpent was

to portray a list of the towns paying tribute to Xochicalco. Furthermore, the depiction of the seated figure in warrior regalia was intended to convey the idea that the towns were conquered and/or the tribute can be credited to the actions of a warrior group. The same symbolism was used to convey the idea of tribute in the Battle Mural at Cacaxtla, although in a somewhat different context. In Late Horizon religious cosmology warriors killed in battle were considered to be divine offerings to the gods. The blood of fallen warriors and sacrificial victims was perceived as a blood tribute needed to nourish the gods and maintain stability in the universe.

At Cacaxtla the symbolism for tribute occurs in the context of "blood tribute" associated with the killing and sacrifice of warriors on the field of battle. The idea of blood tribute is portrayed as a composite association of three separate elements including the four-part circle meaning precious, a row of teeth representing the jaw equivalent or action of eating, and the heart or blood symbol (Fig. 6a). This glyph occurs six times in the Cacaxtla mural either in front of or attached to a warrior in the process of killing a fallen enemy. The blood tribute glyph may also be attached to the weapon doing the killing and in one instance is actually attached to the wrist of a warrior (Individual 10 in the mural) who is graphically thrusting a spear into a wounded opponent (Foncerrada de Molina 1982: fig. 20). The rationalization of warfare as service to the gods is a significant theme in the development of the Central Mexican conquest state. From the available evidence, this appears to have been present during the Epiclassic period.

At Xochicalco we find the relationship between religion and warfare represented by evidence for human sacrifice during the Epiclassic period. Visitors in the eighteenth and nineteenth centuries report many loose stone carvings in the Plaza Ceremonial, some of which were illustrated by Peñafiel (1890). One of the most interesting of these monuments is a full-round sculpture in the form of a human torso which I believe depicts the practice of human sacrifice (Fig. 7). The torso is portrayed as decapitated and severed from its lower legs. The ribs are exposed by a deep incision into the central chest cavity which was presumably made to remove the victim's heart. This monument was proba-

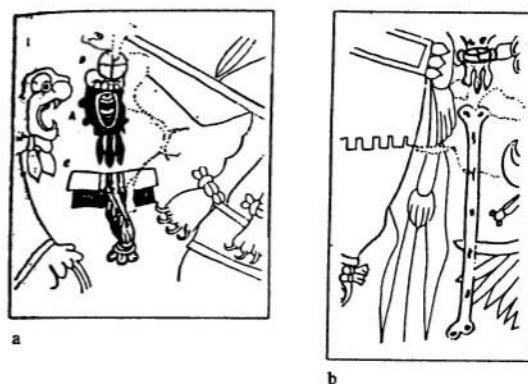


Fig. 6 Portions of the Cacaxtla Battle Mural displaying aspects of militarism: (a) blood tribute symbol, (b) human femur, part of costume of Individual 7. After Foncerrada de Molina 1982, figs. 20 and 30.

³According to Ecker (1940), the translation of Coyoacan in Otomi is *Demin'yo* composed of *Min'yo* (coyote) and *de* (forehead or crest).

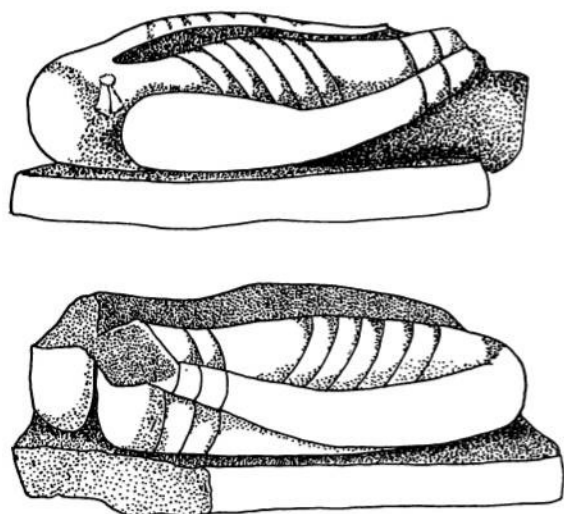


Fig. 7 Xochicalco sculpture portraying human sacrifice. Courtesy of Virginia Grady Smith.

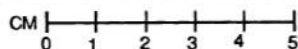
bly used as a sacrificial altar which can be associated with warfare and militarism on the basis of three circumstantial bits of data. First, Peñafiel (1890: 32) locates this monument at the base of the Pyramid of the Plumed Serpent. I believe that this provenience is not accidental and that the monument was originally associated with the temple on the summit of the pyramid where other warfare elements are portrayed. A knotted cord or rope is clearly depicted on the right shoulder of the torso; this was often used as the symbol for captive or capture in Lowland Maya stonework (Marcus 1974; Baudez and Mathews 1978). The dismembered victim was probably a captive taken in battle and subsequently sacrificed. Finally, the portrayal of a human

torso with both its head and legs removed may have been meant to symbolize the taking of war trophies from sacrificial victims. Among the Late Horizon Aztecs, the state claimed the head of the sacrificial victim which was mounted on a *tzompantli*, or skull rack, while the arms and legs were distributed to the warriors participating in the capture. It is significant that the sculpture is depicted without its head and thighs, which may have symbolized the mutual participation and cooperation of the state and the individual in the taking and offering of sacrificial victims to the gods.

The suggestion of trophy taking in the context of human sacrifice is significant because it would be a means of verifying the presence of warrior associations and the acquisition of status through participation in warfare. Among the Aztecs trophy taking validated that a warrior had taken part in the capture of a sacrificial victim, and trophies were believed to be endowed with special mystical properties of benefit to the individual who possessed them (Duran 1964: 164). Two carved human crania, recovered in excavations at Cerro Xochicalco in 1977, have been interpreted as probable sacrificial trophies because of their similarity to human trophy masks used by the Aztecs. Artifact 1 (Fig. 8a) is a cut segment of the frontal and nasal bones of the human face. The artifact was covered with red cinnabar but does not bear traces of the mosaic or inlay found on later Aztec pieces (Noguera 1971). Artifact 2 (Fig. 8b) was cut from the occipital at the back of the skull. A human face was carved on the surface of the bone and then polished to a high luster. Holes drilled around the perimeter of the piece were used to attach adornments or to tie it to another object. The image on the mask is portrayed wearing tubular earspools and has a glyph on its forehead; the mouth of the image is formed by the opening of the foramen magnum.



a



b

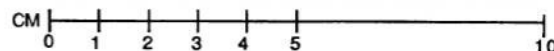


Fig. 8 Human skeletal trophies from Xochicalco: (a) frontal portion of a cut human cranium covered with hematite, (b) mask carved from the occipital of a human cranium.

Excavations at Cholula (Lopez, Lagunas, and Serrano 1970) have uncovered decapitated and dismembered human corpses which may also have been related to the curation of human skeletal heirlooms from vanquished opponents. The relationship between skeletal trophies and Epiclassic warfare is clearly depicted in the Battle Mural at Cacaxtla. Individual 7, one of the victorious jaguar warriors, is shown in battle wearing a decorated human femur as part of his costume (Vol. Fig. 1). Display of a human trophy in this context was probably meant to indicate the individual's rank, ferocity, and, I presume, prior participation in the taking of sacrificial captives in warfare (Fig. 6b).

THE MEANING OF MILITARISM AT XOCHICALCO

The data from Xochicalco and the surrounding region support the position that there was a significant amount of conflict and militarism during the Epiclassic period. The shift of regional settlement to nucleated and defensible locales, the construction of formal fortifications and defensive enclosures, and the presence of militaristic themes in the iconography at Xochicalco all support this conclusion. Epiclassic militarism was not characterized by endemic regional competition between communities but rather appears to have been the power and prerogative of Xochicalco's state elite. This is evident in its simplest form by the distribution of fortifications in and around Xochicalco. Instead of being distributed throughout the region, as would be expected under conditions of intraregional conflict, defensive fortifications were concentrated at Xochicalco to protect the central state and its highest ranking elite.

Imagery on the lower *tablero* of the Pyramid of the Plumed Serpent indicates that militarism at Xochicalco was oriented specifically toward the formation of a tribute-paying conquest state. Toponymic information on the Pyramid of the Plumed Serpent provides valuable, although imprecise, clues about the size and configuration of the Xochicalco state. When taken in conjunction with the distribution of regional ceramic types it appears that Xochicalco's conquest domain extended from Morelos north into the Ajusco Mountains bordering the Valley of Mexico and south and west into the Mixteca baja and the Balsas depression. Perhaps the most important characteristic of Xochicalco and other Epiclassic conquest states is that they had the ability to conquer, integrate, and administer a political domain that stretched beyond the confines of their respective physiographic regions. It is precisely this capability that resulted in the interregional conflict depicted at Cacaxtla where local highland warriors are victorious over a distinct ethnic group with Maya affiliation presumably from somewhere in the Gulf Coast region (see also Nagao; Baird, this volume).

During the Epiclassic we see the consolidation of the Central Mexican lifeway described in ethnohistoric accounts of social and political organization at the time of the Spanish Conquest. Evidence from Xochicalco and elsewhere suggests that the Epiclassic conquest state was based on the support of warrior sodalities, or *quauhpiltzin*, which were characterized by internal ranking, achieved

status, and materialist rewards. Clavijero (1787: 365) points out that Mexican groups were very attentive in distinguishing military rank which was carefully depicted on the battlefield by a warrior's costume. Evidence for this kind of social stratification can be found in the Cacaxtla Battle Mural where distinctive battle costumes portray differences in rank between the warriors. Several of the more elaborately dressed individuals among the victors (Individuals 3 and 29) wear the insignia of Tlaloc with the cross trapeze emblem in their headdress (Vol. Figs. 1–2), while other warriors wear the skins and tunics of the spotted ocelot. It is significant that Individuals 10 and 34 in the Cacaxtla mural are depicted wearing the whole skin of the ocelot which was emblematic of the *Ocelotl* warrior sodality at the time of the Spanish Conquest (Canseco Vincourt 1966: 111). That the Tlaloc and Ocelot warriors are both depicted twice in the murals may be an attempt to convey the notion of paired combatants, which according to some ethnohistoric sources is how *quauhpiltzin* engaged in combat (Sahagún 1979, bk. 8: 88).

It is possible that at least one of the warriors in the Cacaxtla mural is meant to depict a pre-initiate to one of the *quauhpiltzin* warrior sodalities. Individual 25 at the far eastern end of the mural is depicted naked and wearing body paint rather than being dressed in a fashion similar to any of the victorious or vanquished warriors in the battle (Vol. Fig. 1). Among the Aztecs, undistinguished commoners and those going into battle for the first time were not allowed to wear any badge of distinction and usually wore only a simple breechcloth. As a result, undistinguished members of the militia frequently counterfeited the prestigious attire of the rank they wanted to emulate by painting their bodies with the colors and designs of the corresponding costumes (Clavijero 1787: 364–367). Portrayal of this individual in the fray of battle suggests that stratification of society on the basis of deeds in battle already may have existed during the Epiclassic.

Evidence for warrior sodalities at Xochicalco is less direct and resides primarily in the symbolism for human sacrifice and its relationship to the warfare-god nourishment complex which was an integral part of political expansion among the Late Horizon Aztecs. The religious beliefs underlying the warfare-god nourishment complex and its function in the expansion of the Aztec state have been extensively discussed by other investigators (Nicholson 1971; Townsend 1979). Central Mexican groups believed that the world was unstable and could be perpetuated only by nourishing their gods with human blood supplied through death in combat or the periodic sacrifice of human supplicants. Although the origin of this belief is still not known, we find evidence for blood ritual and the importance of bloodletting at least as early as the Classic period at Teotihuacan (Pasztor 1974). The emphasis on bloodletting and the taking of live captives in the Cacaxtla Battle Mural is significant because it places blood ritual specifically within the context of state-sponsored militarism during the Epiclassic. Repeated use of the glyphic representation for blood tribute and its association with warriors as instruments in the sacrificial act suggests that warfare, as the mechanism for provid-

ing nourishment for the gods, had become established as an important principle in Central Mexican religious philosophy. At Xochicalco, human sacrifice is similar in form to that found among the Aztecs and involved the removal of the heart, decapitation, and dismemberment of war captives. The curation of skeletal trophies at Xochicalco is perhaps best understood using a Late Horizon analogy: the trophies functioned as symbols of power and were the evidence of heroic deeds that legitimized the right of membership in a warrior sodality.

XOCHICALCO IN REGIONAL PERSPECTIVE

The Epiclassic period is poorly understood because it cannot be studied within the narrow regional research boundaries in which archaeologists work. There is significant diversity throughout Central Mexico both in the structure, composition, and interaction of Epiclassic groups as they adapted to changing social and political conditions within their respective areas. For example, research in the Valley of Mexico provides a distinct and uncharacteristic picture of Epiclassic social and political conditions when compared to other areas of Central Mexico at the same time. Recent research indicates that Teotihuacan did not collapse at the end of the Classic period but remained the largest single community in the Valley of Mexico during the Epiclassic, decreasing gradually in both size and prestige as the period progressed (Sanders, Parsons, and Santley 1979; Diehl, this volume). Local sociopolitical relationships probably were structured similarly to what they had been during the Classic period. Teotihuacan appears to have been the region's dominant administrative center and may have kept control over much of its former political domain within the valley proper.

Outside the Valley of Mexico, sociopolitical conditions were substantially different. Contact with Teotihuacan was quite variable, and the city appears to have lost direct control over most of Central Mexico by the start of the Epiclassic period. Independent state centers such as Xochicalco, Cacaxtla, and perhaps Teotenango appeared which were concerned with the governance and exploitation of their own respective regions. One question that remains to be answered is how much direct contact these new centers had with Teotihuacan or other centers in the Valley of Mexico. Were they economic and political competitors, or did they share a common culture through political coexistence and overlapping and interacting economic relationships?

Data collected by the Xochicalco Mapping Project indicate that Epiclassic groups in western Morelos developed and maintained a distinct cultural tradition from that found in the Valley of Mexico. Western Morelos was not strongly dominated by Teotihuacan during the several centuries prior to Xochicalco's rise to power. Although Teotihuacan style ceramics occur throughout the area during the Classic period (A.D. 250–650), they are less abundant and include a greater number of poorly made local imitations than are found elsewhere in Central Mexico at the same time (Hirth and Angulo 1981).

Growth in the size and prestige of Xochicalco was matched by a corollary decrease in the number of ceramic

similarities with the Valley of Mexico. During the first half of the Epiclassic period ceramic comparability between the two areas was restricted to general similarities in the form and decoration of storage jars and simple tripod bowls. Western Morelos lacked all of the common Metepec phase trade wares found at Teotihuacan, including Thin Orange, and appears to have established independent trade relationships resulting in the importation of metamorphic and micaceous paste wares from Guerrero and the Mixteca. By the Late Epiclassic we find two distinct, noninteracting ceramic spheres appearing in the Highlands. In the Valley of Mexico we find the distinctive Coyotlatelco ceramic tradition with its characteristic red-on-brown decorative painting (Rattray 1966), while Xochicalco maintains a simple orange-and-brown monochrome tradition with limited use of bichrome design (Cyphers Guillén 1980). What is important here is that virtually *none* of the Coyotlatelco painted ceramic types have been recovered from Xochicalco or other sites in western Morelos. This is unusual because Coyotlatelco decorated ware is abundant throughout the Valley of Mexico and the Valley of Toluca (Vargas Pacheco 1980; Sugiura Yamamoto, personal communication) and even occurs in the Amatzinac region in eastern Morelos (Hirth 1977). The absence of ceramic ties to the Valley of Mexico is significant in light of the long-distance contacts Xochicalco established during this time with such areas as the Valley of Oaxaca, Veracruz, and the Maya region (Sáenz 1963, 1964; Litvak King 1972).

Recent source analysis of obsidian from archaeological sites in western Morelos indicates a similar change in obsidian procurement networks between the Classic and Epiclassic periods (Sorensen, Hirth, and Ferguson n.d.). During the Classic period, lithic workshops at Teotihuacan produced large quantities of obsidian artifacts for export throughout Central Mexico and beyond (Spence 1981; Santley 1984). Most of the artifacts produced in these workshops were manufactured from obsidian coming from the Otumba and Pachuca sources which were under the direct control of the Teotihuacan state. Analysis of seventeen obsidian artifacts from Late Classic deposits at Miahuatlan (RCT-119) indicates that the majority of the obsidian reaching sites in western Morelos originated from Teotihuacan-controlled obsidian sources (Table 1).

TABLE 1: SOURCE ANALYSIS OF LATE CLASSIC OBSIDIAN FROM THE SITE OF MIAHUATLAN PUEBLO (RCT-119) IN WESTERN MORELOS

	Identified Obsidian Sources			Total
	Pachuca	Otumba	Zinapécuaro	
Excavation B	7	1	2	10
Excavation E	5	1	1	7
TOTAL	12	2	3	17
Percentage of Total	(70.6)	(11.8)	(17.6)	(100.0)

The situation changed substantially during the Epiclassic period (Table 2). Source analysis of 116 obsidian artifacts from Xochicalco indicates a decline in the procurement and utilization of obsidian from the traditional Teotihuacan

TABLE 2: SOURCE ANALYSIS OF OBSIDIAN FROM EPICLASSIC CONTEXTS AT XOCHICALCO AND TLACUATZINGO, MORELOS

	Zinapécuaro	Otumba	Paredon	Identified Obsidian Sources Metzquititlan	Pachuca	Unknown	Total
Xochicalco surface collections							
Workshop 1	22	2	0	2	1	0	27
Workshop 3	20	0	0	0	0	0	20
Xochicalco excavations							
La Maqueta	7	1	0	1	1	1	11
Terrace 2	14	1	0	1	1	1	18
Campo Santo	18	0	0	2	0	0	20
Tlacuatzingo Exc. D	18	1	1	0	0	0	20
TOTAL	99	5	1	6	3	2	116
Percentage of Total	(85.3)	(4.3)	(.9)	(5.2)	(2.6)	(1.7)	(100.0)

sources. The quantity of Pachuca obsidian declined significantly in western Morelos, and Otumba obsidian all but disappeared despite the continued operation of large production workshops at Teotihuacan. Instead, Xochicalco appears to have relied heavily on the importation of obsidian from the more distant Ucareo source near Zinapécuaro, Michoacan. This is significant because the Ucareo source is much farther from Xochicalco than either the Otumba or Pachuca obsidian mines; the distance from Xochicalco to the Ucareo source is 197 km, while Otumba and Pachuca are only 98 and 125 km from the site. Obsidian from Ucareo probably reached western Morelos by circuitous trade routes which bypassed the western edge of the Valley of Mexico.

The differences in the material culture remains between western Morelos and the Valley of Mexico appear to be the result of their polarization under separate and competing political centers. During previous periods similarities in ceramic assemblages indicated communication flow and/or economic interaction between these regions. Interruption of these linkages and the coexistence of two distinct ceramic spheres are significant, reflecting a breakdown of former interdependencies established over a long period of time. The preference for obsidian from the more distant Ucareo source over closer ones is more likely a reflection of political and/or social boundaries rather than of expected economic behavior without corollary constraints.

I believe that this situation reflects the emergence of Xochicalco as a powerful and independent political competitor within the old Teotihuacan domain. Whether Xochicalco was in direct competition with Teotihuacan or some of the other large sites in the southern lakes region is not particularly clear. What is certain, however, is that important symbiotic relationships had developed between the Valley of Morelos and the Valley of Mexico during the Classic period (Hirth 1980; Hirth and Angulo 1981). I believe that elites in the Valley of Mexico had become dependent upon Morelos and other areas of the Tierra Templada as sources for the production of cotton, paper, and other tropical products which could not be produced in the Valley of Mexico. The breakup of the old Teotihuacan domain and the growth of independent polities throughout Central Mexico reduced the number of alternative source areas for these goods. This only intensified the need for

Valley of Mexico elites to maintain access to or control over portions of Morelos which was their closest and most accessible source for tropical products. Despite the continued demand for Tierra Templada products, I believe western Morelos was largely free of Valley of Mexico control during the Epiclassic. Socioeconomic independence was possible only through the emergence of a regional polity capable of establishing and maintaining its local autonomy. Xochicalco's rise to power represents the coalition of political authority in western Morelos. Its regionally distinct cultural assemblage indicates an absence of economic interdependencies with the Valley of Mexico.

CONCLUSION

In this paper I have attempted to summarize the available data and interpret the significance of militarism for explaining the development of Xochicalco. The Epiclassic was a period of conflict and regional militarism brought on, at least in part, by the destabilization of Teotihuacan administrative control throughout Central Mexico. Xochicalco is one of several independent states emerging during this era through regional conquest and the collection of tribute.

What is surprising about the available data on the Epiclassic is not that there is evidence for militarism, but rather that it so closely parallels the pattern of militarism found in Central Mexico at the time of the conquest. The Epiclassic conquest state may have been based upon the appearance of warrior sodalities, where participation in warfare provided a vehicle for upward social mobility through the acquisition of rank, privilege, and material reward. Evidence was also found for a range of related activities including human sacrifice and the curation of trophies from vanquished enemies. It would appear that militarism during this period was reinforced by a belief system that advocated warfare and blood sacrifice as a necessary aspect of the religious complex.

The point on which I would like to conclude is that societies during the Epiclassic period display all the characteristics manifested by the Late Horizon conquest states. Militarism during this period was the central theme in the organization of conquest states supported by internally stratified warrior sodalities. Investigators interested in the

origin of the Central Mexican conquest state must now turn their attention to the Middle Horizon when warrior themes became prevalent at Teotihuacan (Millon 1973; Berlo 1983).

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Public Proclamation in the Art of Cacaxtla and Xochicalco

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MESOAMERICA UNDERWENT DRAMATIC POLITICAL, economic, social, and religious changes during the Epiclassic period. These changes are evident in shifts in settlement patterns, ceramic types, obsidian distribution patterns, and in art styles of public monuments at sites that became important after Teotihuacan's decline. While settlement patterns and ceramics can be said to "reflect" aspects of such cultural changes, the same cannot be said for monumental public artworks, including architecture, sculpture, and painting. In these monumental cultural artifacts, meaning is not "reflected" in a passive manner, rather it is invested with a deliberate goal: to "broadcast" a particular message to shape the viewpoint of the audience of a given time (cf. Kubler 1973; Winter 1981, 1985). Focusing on artistic developments at the Central Mexican centers of Cacaxtla and Xochicalco, this article will consider the significance of such monumental public artworks during this transitional era.

A comparison of Cacaxtla and Xochicalco, two sites fundamental to an understanding of Epiclassic Central Mexico, highlights certain differences that are not apparent when considering just one of these sites. The art style of both sites is commonly called "eclectic." However, a more careful comparison of the nature of nonlocal artistic traits reveals that the two sites are quite different in their adaptation of foreign elements to a local visual system. Moreover, the differential nature of data available for the two sites has influenced their interpretation, especially in the case of Cacaxtla. Despite these variations in specific interpretations, certain common underlying assumptions regarding the significance of artworks have pervaded research on these sites.

Research for the original version of this paper, presented at the fiftieth annual Society for American Archaeology meetings, Denver 1985, as well as this expanded version, was made possible by grants from the Doherty Foundation, the Organization of American States, and a Fulbright-Hays Research Abroad Grant. This work forms part of a doctoral dissertation in progress at Columbia University, New York. Background research on the topic was begun during a 1983 summer fellowship at Dumbarton Oaks.

Numerous individuals have provided many useful comments and suggestions on earlier versions of this article; I owe thanks to Ann Cyphers Guillén, Richard Diehl, Doris Heyden, Joyce Marcus, Wendy Schonfeld, Emily Umberger, and especially to Janet Berlo for her extensive editorial comments. Nevertheless, I remain responsible for any errors or omissions.

PREVIOUS STUDIES OF EPICLASSIC ARTWORKS

Studies of Cacaxtla and Xochicalco have been dominated by a literal approach: too often scholars assume that what is depicted reflects the "truth" of the times (e.g., Abascal et al. 1976; Sáenz 1975). Monuments are interpreted as pictorial documents recording events rather than as preplanned programs influencing an audience's outlook.¹ In addition, most studies attempt such a literal reading based on only a partial corpus of a site's artworks rather than on the totality of available remains representing a center's artistic production (e.g., Walling 1982). Another major interest has been the search for evidence of "influences" and their origins in order to reassemble patterns of cultural interaction (Litvak King 1972; Foncerrada de Molina 1980).

The highly visible eclecticism of public monuments has generally been considered evidence of foreign "intrusion," "presence," or "interaction." Implicit in most discussions of Cacaxtla or Xochicalco is the notion that changes in public monuments were caused by the intrusion of foreign peoples. For example, invasion or conquest has been proposed for Cacaxtla on the basis of ethnohistorical sources, the site's fortifications, as well as on the aggressive imagery of the battle scene (e.g., López de Molina 1977a; López de Molina and Molina Feal 1986: 42). Migration has also been posited for both sites, again largely based on ethnohistorical sources (e.g., Abascal et al. 1976; Chavero and Plancarte in Litvak King 1972: 55). Interelite relations have been suggested as the link between Cacaxtla and the Maya region (Robertson 1985; Kubler 1980; Quirarte 1983).

In these previous approaches, the possibility of a high degree of manipulation of public monuments to communicate a political image rather than a true reality is seldom considered. If the premise that the shaping of ideology can be an important stabilizing factor in the establishment of sociopolitical order, then the pivotal role of artworks in this process cannot be ignored. One must ask, "How did

¹The multifaceted role played by art in society has been examined by several scholars (e.g., Pasztory 1984; Merriam 1971). Others have pointed out its more politically self-serving ends, especially in Mesoamerica (e.g., Townsend 1979). A more explicit examination of the political maneuvering of artworks has been done by Umberger (1987) and Winter (1977, 1981, 1985), for the art of the Aztecs and the Ancient Near East respectively.

ruler-patrons of monumental public works manipulate style and symbolism to serve their needs?"

Another problem in previous studies, especially true of the literal approach and the search for origins of "influence," is the difficulty in determining source and direction of information flow.² During and after the Middle Classic period, extensive highland-lowland interaction led to considerable intermingling of stylistic and symbolic details (Pasztor 1978). The matter of "source" thus becomes complicated by the possibility that traits were not necessarily adopted from their original, primary sources but rather from some secondary or other intermediary source.³ The only means of determining the nature of a source is a contextual study of form, structure, and associated elements. This type of analysis can suggest possible changes in form or meaning through time (cf. Berlo 1984: 102).

²The term "influence" itself is problematical due to its directional implications. It also seems to indicate direct contacts, which can often not be determined. Perhaps a better, more neutral term is "interaction" (cf. Winter 1977: 381).

³For example, Berlo (1984: 120) has discussed tripod vessel imagery from Escuintla as the intermediary source for Teotihuacan elements that appear in Cotzumalhuapa art.

It is also important to stress that mere contact between different groups does not imply that one or the other will be receptive to the adoption of alien traits (cf. Berlo 1984: 55–56, 124–126, 200–215). Material evidence of contact or interaction on any level has often been indiscriminately equated with "influence." Although change and innovation are viewed as highly positive values in the twentieth century Western world, it is not clear that the same can be said for pre-Hispanic Mesoamerica. To establish that a center had trade contacts or elite relations with one area or another does not explain *why* large-scale public monuments were or were *not* affected. What conditions promoted the initial interest in and receptivity to the adoption of alien aspects of style and symbolism? Considering the massive quantities of labor and material resources invested in public artworks, it is unlikely that these decisions were made for purely aesthetic reasons. Underlying economic, sociopolitical, and other considerations probably influenced such stylistic and symbolic choices (cf. Pasztor 1984).

I am proposing that monumental Epiclassic artworks be viewed as political programs intended to shape public opinion and that, as such, they present a desired reality but not

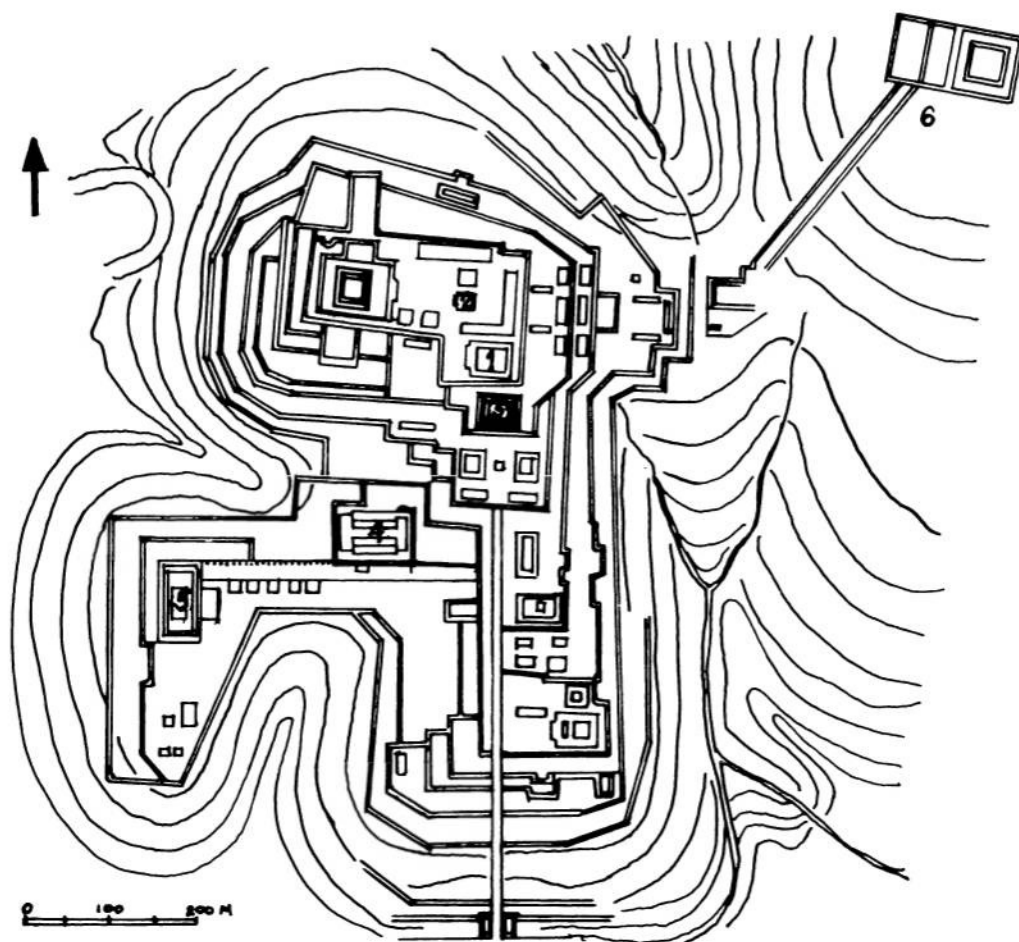


Fig. 1 Plan of main ceremonial area, Xochicalco: (1) Structure A, (2) Pyramid of the Plumed Serpent, (3) Structure E, (4) Ballcourt, (5) Malinche, (6) Cerro de la Bodega. After Kubler 1984: 69.



Fig. 2 View of the Pyramid of the Plumed Serpent, Xochicalco. Personal photo, published courtesy of INAH, Mexico.

necessarily a historically accurate one.⁴ In order to understand this process and the role of public monuments during this transitional phase, it is important to consider a number of questions: What were the needs and concerns of Epiclassic patrons, and how did they differ from those of the Classic period? What messages were encoded in public artworks? How did artworks effectively convey these messages?

Although my primary interest is in the public artworks of Cacaxtla and Xochicalco, the monuments alone cannot be understood without some awareness of the cultural context provided by other material remains. By comparing the story told by public monuments with that suggested by other artifacts, particularly those of a portable nature, the veracity of the public proclamation of cosmopolitanism can be checked. In most studies of foreign interaction, all types of artifacts from colossal constructions to small portable goods are weighed evenly as evidence to reconstruct possible “foreign” contacts. Admittedly, patterns of ties with other centers represented by large-scale monuments are often reinforced by small-scale portable goods, such as raw materials, luxury items, or finished utilitarian products. However, when the two levels—monumental and portable—do not correlate, what can this suggest about artistic choices and communication on an ideational level? What can it imply about an awareness and manipulation of nonlocal styles?

In this article I plan to reassess the nature of evidence of nonlocal interaction at Cacaxtla and Xochicalco based on three categories of material remains: public monuments, luxury items, and utilitarian goods. After an introduction to the history and archaeology of each site, traits previously identified as of Maya, Teotihuacan, Oaxaca, Veracruz, or Guerrero-Michoacan origin will be examined to determine the nature and extent of correlation and divergence in different types of material remains. This type of overview, considering broad categories of information, contrasts with the

often detailed orientation of previous studies in which isolated traits taken out of context are considered as evidence of nonlocal interaction. The last section is a general discussion of the implications of the selection processes evident in public artworks.

SITE BACKGROUNDS

Before examining specific features of the arts of Cacaxtla and Xochicalco, a synthesis of general data on both sites is useful to place them within their respective historical and archaeological contexts. Knowledge of the two sites through time has been quite different. Xochicalco has been known since the sixteenth century; the Aztecs venerated the site, and some of their myths concerning its history have survived (Litvak King 1971: 101). Although its impressive remains are described by numerous visitors during the eighteenth and nineteenth centuries, few sixteenth-century ethnohistorical texts shed light on Xochicalco's original eighth to tenth-century inhabitants.

Contemporary knowledge of the site is primarily based on investigations carried out over the last century. Eduard Seler (1960), Antonio Peñafiel (1890), and Adela Breton (1906) published drawings of the Pyramid of the Plumed Serpent (Figs. 1–2), which was later reconstructed by Leopoldo Batres in 1909 (Litvak King 1971: 110). During the 1930s through 1950s, Eduardo Noguera (1945, 1947) developed a ceramic sequence based on materials from stratigraphic pits. More recently, Kenneth Hirth (1982, 1984, n.d.), with Jorge Angulo, carried out the Coatlan Project and the Xochicalco Mapping Project aimed at defining the role of Xochicalco within the context of western Morelos, and the extent, growth, and internal organization of the site itself. This recent research has resulted in a revised ceramic sequence and has clarified the chronology and development of the site (Cyphers Guillén 1980; Hirth 1984, n.d.; see also Hirth, this volume).

Cacaxtla, on the other hand, although apparently known in the sixteenth century (Muñoz Camargo 1892: 20–23), was covered by layers of soil and overgrowth so that it was

⁴See also Carlson (1980) on the “historical” validity of Classic Maya inscriptions and Umberger (n.d.: 209–223) and Winter (1981, 1985) on the power of artworks as communication tools used to consolidate a polity's power via ideological maneuvering.

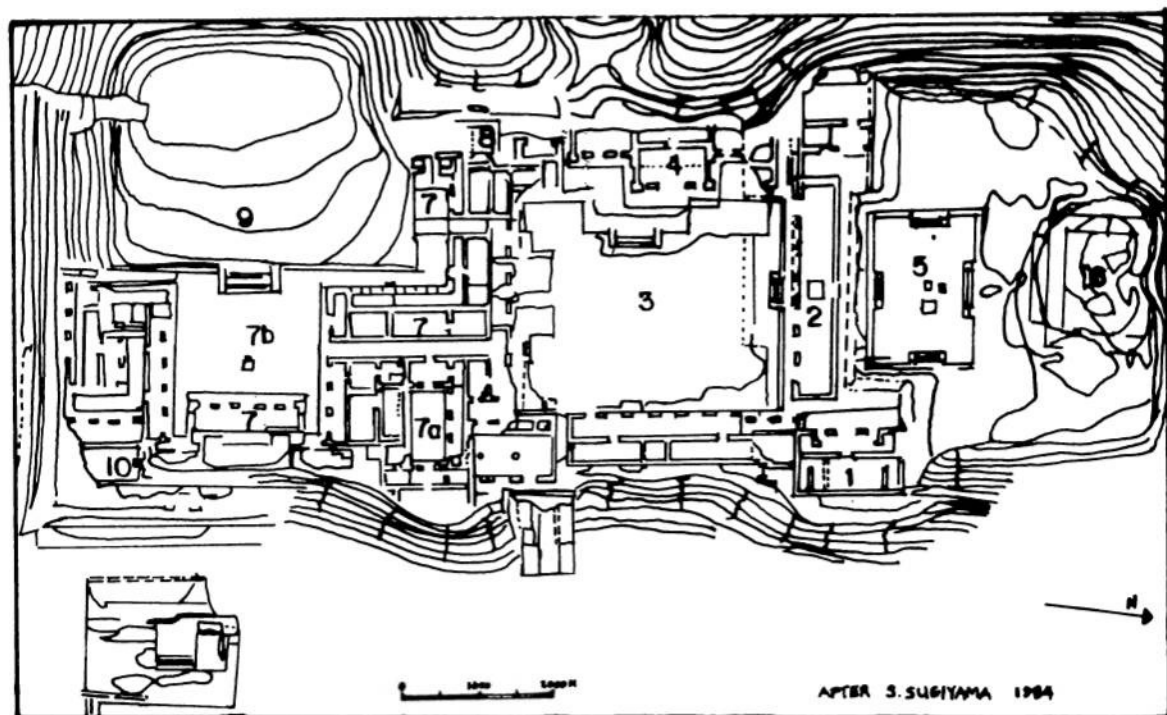


Fig. 3 Plan of main ceremonial area, Cacaxtla: (1) Building A, (2) Building B, (3) North Plaza, (4) Building E, (5) Sunken Patio, (6) Mound Y, (7) Palace, (7a) Patio of the Rhomboids, (7b) Patio of the Altars, (8) Lattice Window Structure, (9) Group 2, (10) Room of the Stairway. After García Cook 1986: 50–51.

largely forgotten and ignored until it was “rediscovered” in 1975 at the uncovering of the famous murals. In contrast to Xochicalco, relatively little archaeological investigation has been carried out at the site. In the 1940s Pedro Armillas (1946, n.d.) visited and described surface remains visible at the site and identified it as the Olmeca-Xicalanca capital mentioned in the sixteenth-century documents. Excavations have been undertaken only in the last decade from 1975 to 1979 under Diana López de Molina and Daniel Molina Feal (1986, n.d.a, n.d.b, n.d.c), who consolidated the presently visible portions of the site (Fig. 3).⁵

Another fundamental difference between the two sites is that there is much more information on Cacaxtla than Xochicalco in early ethnohistorical sources. This has led to differing cultural interpretations of the two. Because Cacaxtla is mentioned as the capital of the mysterious Olmeca-Xicalanca (Muñoz Camargo 1892: 19–26, 49–54, 208), any reference to this group in the chronicles has been considered relevant to the study of Cacaxtla (López de Molina and Molina Feal 1986; Lombardo de Ruiz 1986).

⁵In 1985 Andrés Santana (n.d.) and Rosalba Delgadillo (n.d.) discovered more murals beneath the Palace and Group II areas of the hilltop and excavated the southeastern slope of the hill of Cacaxtla. These recently uncovered murals include a part of a feathered serpent and aquatic border similar to those of Building A, but surrounding a blank field, and a maize plant sprouting elongated human heads instead of maize (Delgadillo n.d.). More recently, archaeologists from the Salvaje Archaeology Department (Salvamento) of the Instituto Nacional de Antropología e Historia (INAH) have uncovered mural and clay sculptural remains while digging large pits around the perimeter of the hill to sustain supports for a colossal roofing system intended to cover the site. The uncovered mural fragment appears to represent a speared leg glyph, encircled in a red medallion. In addition, a life-sized polychrome clay sculpture was found at the base of the hill, near the modern stairway to the site. It appears to depict a striding male figure similar to the warriors in the Building B murals.

Just as the contemporary museum-goer often looks at the label before examining the object described, often investigators have relied on the words of historic chronicles to solve the enigmas posed by Cacaxtla's material remains. In the case of Cacaxtla, the poorly known Olmeca-Xicalanca have been adopted as the “label” to explain the site.⁶ The identity, origins, history, and ethnic affiliations of the Olmeca-Xicalanca are so controversial that the identification of Cacaxtla as one of their capitals explains very little.⁷

Based on archaeological research to date, it appears that Cacaxtla and Xochicalco played different roles within their respective regional contexts. Xochicalco was a much larger and more important site than Cacaxtla. The tremendous

⁶I do not intend to suggest that ethnohistorical texts cannot be used as valuable and effective tools in understanding the past but rather that, in the present case, documents have not served to clarify the situation of Cacaxtla. For an excellent example of how archaeology and ethnohistory can be used together to understand material remains dating to before the Late Post-Classic Aztec culture, see Marcus (1978).

⁷Numerous scholars, including Wigberto Jiménez Moreno (1942, 1966), Paul Kirchhoff (1940), Robert Chadwick (1966), and Nigel Davies (1977), have attempted to present a coherent portrait of the Olmeca-Xicalanca based on the often contradictory bits and pieces of information scattered throughout 16th-century chronicles.

Angel García Cook (1981) has written on Olmeca-Xicalanca presence in the Puebla-Tlaxcala region from an archaeological perspective. While he has firmly maintained that there is little doubt about the presence and movements of this group, he has also admitted that they are poorly defined archaeologically. According to García Cook (personal communication, 1984) three ceramic types occurring together or in isolation are diagnostics for the Olmeca-Xicalanca. These types are a highly polished red ware with Mixtec associations, a fine paste ware with southern Veracruz or Tabasco relations, and a red-on-buff Coyotlatelco-related ware. López de Molina and Molina Feal (1986: 69), on the other hand, mention a red-on-brown ware known from Huejotzingo and Tula, and consider this type one of the most diagnostic for Olmeca-Xicalanca influence.



Fig. 4 Drawings of Building A murals, Cacaxtla. (a) north door and jamb (b) south door and jamb. After Quirarte 1983.

growth of Xochicalco from approximately A.D. 650–900 transformed it into the largest settlement in the Valley of Morelos for the Epiclassic period with a surface area of about 2.24 km² scattered over almost all the hills and slopes surrounding the central ceremonial area (Hirth 1984; n.d.: 295, 297). Although the entire extent of Cacaxtla is still not known, most investigators view it as a small, secondary site (Daniel Molina Feal, personal communication, September 1984). The excavated portion of the site is less than 10,000 m² (Saburo Sugiyama, personal communication, July 1985), so at this point the extent and chronology of the site are still unclear.⁸ Nevertheless, it

has been speculated that although Cacaxtla was probably the largest site in the immediate vicinity, this area was only one of five independent cultural regions in the Puebla-Tlaxcala Valley during the period of Cacaxtla's apogee (García Cook 1981: 271–273), which is generally placed between A.D. 650 and 850 (López de Molina 1981: 170; Armillas 1946: 141).

EVIDENCE FOR NONLOCAL INTERACTION

The discussion of Maya, Teotihuacan, Oaxaca, Gulf Coast and Guerrero-Michoacan traits will focus on elements of style and symbolism, as well as on evidence of commercial or possible interelite interaction with these different areas. Patterns projected by artworks will be compared with relations suggested by portable, nonperishable remains to see how the "image" expressed in monumental

⁸It is significant that, in the recent work by Salvamento at Cacaxtla, even after digging pits more than 16 m deep, they still did not hit bedrock but rather found at least four construction floors that appeared to date to the Classic period (Octavio Corona Paredes, personal communication, April 1986).

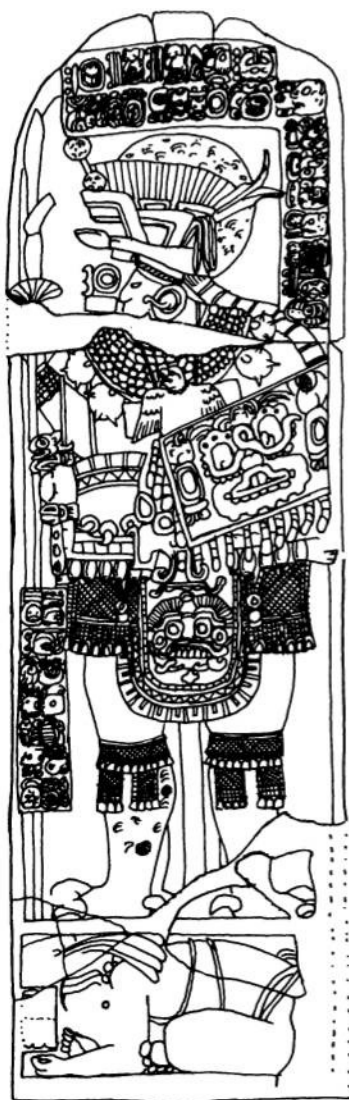


Fig. 5 Drawing of Aguateca Stela 2. After Miller 1986: fig. 26.

programs relates to the "reality" presented by portable evidence of foreign interaction.⁹

Cacaxtla

At Cacaxtla, without doubt the overwhelming nonlocal component is the Southern Lowland Maya style.¹⁰ This includes Maya canons of proportion; varied, active poses; fluid body articulation; complex overlapping of figures;

⁹One obvious limitation in studying portable remains is that only nonperishables such as ceramics and obsidian have survived through time, while other important trade items, such as salt, feathers, or foodstuffs, for example, would leave no trace.

¹⁰Architectural traits identified as Maya include elongated structures with multidoored entrances (Kubler 1980: 163) and clay, low-relief rhomboid decoration (López de Molina 1977a: 9). Closer similarities with the Northern Maya Lowlands have been posited by some (e.g., Abascal et al. 1976: 43–44; Foncerrada de Molina 1978b: 106). Some parallels do exist, for example, in general themes (battles, hieratic representations, processions) and in iconographic details (*quechquemilt* type garment worn by male warriors or perhaps captives; door as maw; feathered serpent). However, there are many more stylistic and symbolic connections with the Southern Lowland region to date. As we learn more about Northern Lowland culture, perhaps this picture will change.

double outlines for certain bodily contours; and even Maya facial features (Vol. Figs. 1–2, Fig. 5).¹¹ Similarly, general themes—confrontation, procession, and hieratic representations—are shared with the Maya area. Conflict and processions are known from Maya mural painting at Bonampak, Uaxactun, and Mul Chic, and from ceramic cylindrical vessels, while hieratic compositions are more ubiquitous on Maya monumental sculpture.¹²

Numerous details of Maya costume insignia were incorporated into the Cacaxtla murals. These symbols often deal with political or dynastic power in Maya monumental stone sculpture; such symbols include the double-headed serpent bar, the Tlaloc mask worn with trapeze-and-ray sign headdress, tied rope collars, triple knot insignia, and the all-or-partially-encasing animal costume. Although some of these motifs occur at Teotihuacan, closer parallels, consisting of similar clusters of elements, exist in the Maya Lowlands (Baird; Stone, this volume).

The Tlaloc mask worn with trapeze-and-ray headdress

¹¹For a more detailed study of Maya stylistic traits in the Cacaxtla murals, see Robertson (1985) and Quirarte (1983). The blue used in the murals has also been suggested to be "Maya blue" (López de Molina and Molina Feal n.d.b), but chemical analysis of the pigment has not been carried out.

¹²On Bonampak, see Miller (1986); on Uaxactun, Morley et al. (1983: 295); Mul Chic, Piña Chan (1964); Maya ceramics, Robicsek and Hales (1981: 71–74), M. Coe (1978: pl. 9; 1973: pl. 61), and Morley (1983: 434); and Maya monuments, Greene, Rands, and Graham (1972: 50, 52, 254, 272, 216–249).

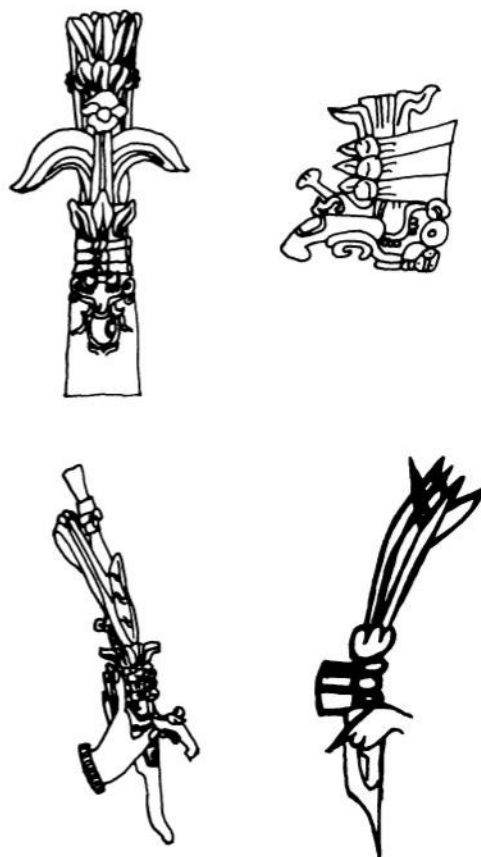


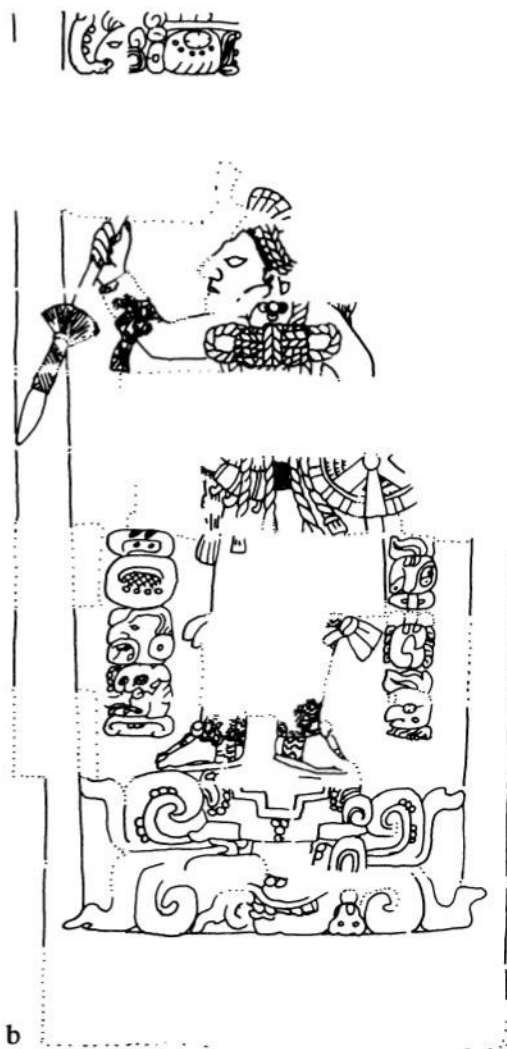
Fig. 6 Drawings of ceremonial bloodletters. After Joralemon 1974: fig. 24.



Fig. 7 Drawings of (a) Yaxchilan Lintel 16, Structure 21. After Graham and von Euw 1977: 3:41. (b) Northeast jamb, Structure 10L-18, Copan. After Proyecto Arqueológico Copan 1983.

appears most frequently in Mesoamerica outside of Teotihuacan, especially in the Southern Maya Lowlands (Fig. 5; Berlo n.d.) and at Cacaxtla as well (nos. 3 and 29 in Vol. Figs.). In the Southern Maya Lowlands, the Tlaloc mask with trapeze-and-ray headdress is worn by the ruler in two principal contexts: autosacrificial rituals and ruler as warrior rites, where insignia such as jaguar costume elements and weapons are added (Schele 1984: 30–33). Both of these meanings may have been intended at Cacaxtla, based on the similar costume complex.

Similarly, the prominent use of three knots as insignia at Cacaxtla constitutes a special configuration not known at Teotihuacan but prevalent in the Maya region as references to sacrifice and autosacrifice (Fig. 6). The ceremonial blood-letting instrument in Maya art is shown as an actual implement and as a personified deity (Joralemon 1974); consistent throughout is the appearance of three knotted horizontal bands. Although neither the perforator nor its associated personification appears at Cacaxtla, the three knots appear as an abbreviated reference to bloodletting on a bundle of darts and a double-headed serpent bar (Fig. 4a, b). The examples of the Maya scattering gesture as autosacrificial ritual, discussed by Stuart (1984: 6, 10–12), show the ruler holding a short staff prominently displaying the triple knot motif. The underlying significance of two-headed serpents is related to self-sacrifice (Stuart 1984: 17), and in some instances staffs combine the double-headed serpent with the triple knot, both symbols of autosacrifice, with the spear, a more direct reference to sacrifice, shown as the serpent's sharp blade tongue (e.g., limestone panel from the Bonampak area in Joralemon 1974: 68). At



Cacaxtla there appears to be a similar conflation of these concepts.

Prominent knotted ropes worn as collars also have closer ties with the Maya region than with Teotihuacan and the central highlands. At Teotihuacan, knotted sashes, but not of rope, appear in costumes (Berlo 1984: 62, 156–157, 204), while in Maya representations, knotted rope collars are worn by captives and sacrificial victims (Fig. 7a; Quirarte 1983: 209; Schele 1984: 21, 43), and occasionally by Maya elite (Fig. 7b).¹³ Schele (1984: 30, 45) has identified Maya monuments in which the ruler appears in a position of humiliation as part of self-sacrificial rites. Perhaps these ties at Cacaxtla can also be regarded as part of the autosacrificial complex, as a reference to the ruler's responsibility to let his own blood as well as that of his captives.

The only portable objects related to the Maya style from Cacaxtla are luxury items: a greenstone face pendant and two polychrome urns. The face pendant, 3 cm in height, is made of a dark, highly polished greenstone (Fig. 8). The features are rendered schematically, the eyes and mouth formed solely by circles bisected by a curved line. Similar

¹³For additional examples of knotted rope collars worn by rulers at Yaxchilan, see Graham (1979: 91, 93) and Graham and von Euw (1977: 13, 15, 17, 33, 39, 41, 43, 47).



Fig. 8 Greenstone face pendant from Cacaxtla, INAH Regional Museum, Tlaxcala. After López de Molina and Molina Feal 1986: pl. 161. Photo published courtesy of INAH, Mexico.

pendants have been found at Monte Alban (Caso 1965: fig. 23d; Paddock 1966: 159), Tula (Diehl 1983: pl. 51), and Nebaj (Smith and Kidder 1951: fig. 53c). Although the sources of these face pendants are unknown, they resemble plaques generally labeled as "Maya" in style (cf. Digby 1964: 25, p. xiv; Caso 1965: 906–908) or occasionally as Mixtec (Caso 1965: 908). This hardly constitutes evidence of Maya interaction, for it is not at all clear that these pieces proceed from the Maya region.

Two polychrome urns found at Cacaxtla recall the Maya style in the naturalistic facial modeling, rounded corporeal forms of the effigy figures, and costume details (Fig. 9a, b). Both urns depict a central winged, corpulent figure dressed in Maya costume, with shells pendant from waistband, flanked by stalks of cacao and a subsidiary figure at each side. Similarities in composition and vessel shape suggest

that the urns form a pair, although they differ in iconographic detail and were found in different locations.¹⁴ Andrés Santana (personal communication, March 1984) contrasts the skilled modeling and application of the figures with the crudely and unevenly formed body of the vessel, made of a local clay. Their closest parallels in style and technique are *incensario* bases from a cave in Tapijulapa, Tabasco, now in the Regional Museum of Tabasco (Fondo Editorial de la Plástica Mexicana 1964: figs. 382–383).¹⁵ Although the inspiration for these vessels may have been Maya, they were clearly local adaptations at Cacaxtla. Like the murals, the skillful handling of the medium suggests the presence of nonlocal artists rather than the local copying of foreign styles.

No small-scale Maya remains, such as utilitarian goods attesting to commercial ties or luxury items suggesting interelite exchange or perhaps war spoils, have been found. In fact, the search for small-scale luxury items of any kind in the elite center of Cacaxtla has yielded minimal results. In contrast to the rich ornaments worn by the figures in the murals, few personal ornaments and luxury goods have been found at the site. Numerous shells and small beads have been found, but very little greenstone has been unearthed (López de Molina and Molina Feal n.d.a, n.d.b, n.d.c, 1986). Thus, a dramatic contrast is formed between

¹⁴The first urn, with central figure wearing bird headdress and wings, was found in a small niche, probably a ceremonial deposit in Building E, located to the west of the main plaza (López de Molina and Molina Feal 1980: 51). The second one, bearing a figure with spotted jaguar pelt wings and a butterfly or bat headdress with curled snout, was found at the southern end of the main plaza in a pit about 3 m below the level associated with the Building B murals, but its original context is unknown (Delgadillo n.d.).

¹⁵Thanks to Karl Taube (personal communication, July 1986) for bringing this to my attention.



Fig. 9 (a) Urn II from Cacaxtla, INAH Regional Museum, Tlaxcala. (b) Urn I from Cacaxtla, Cacaxtla Museum, San Miguel del Milagro, Tlaxcala. Personal photos, published courtesy of INAH, Mexico.

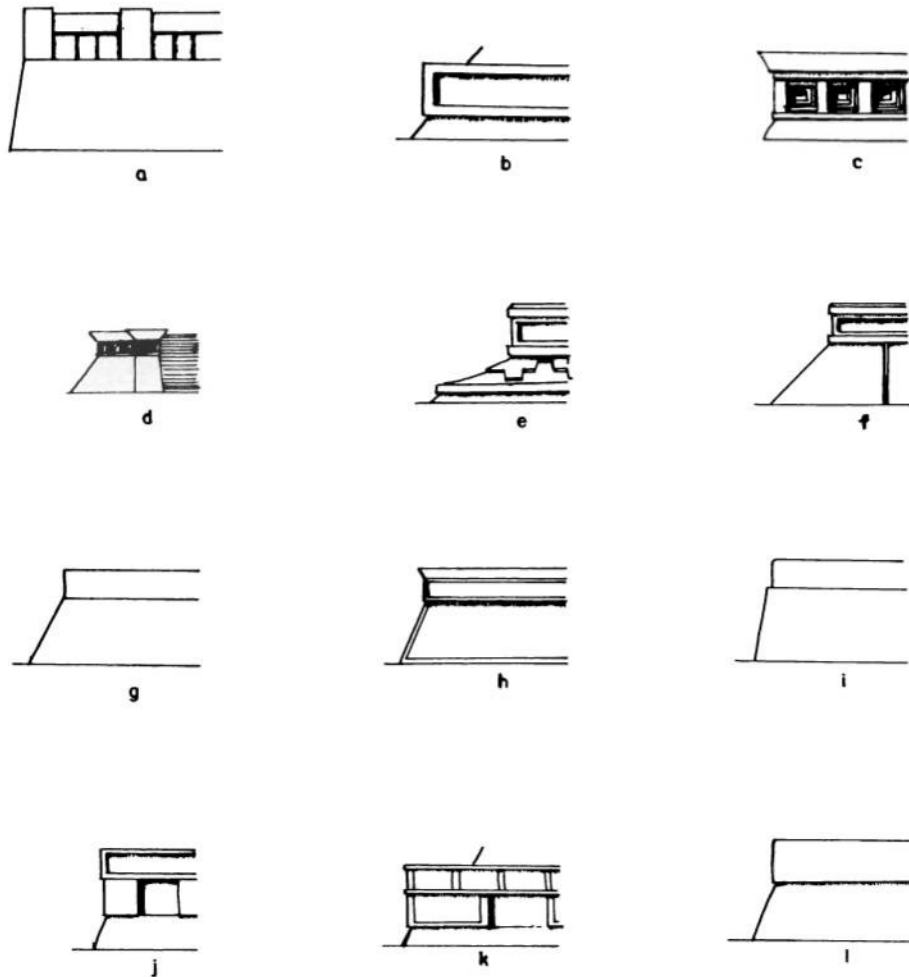


Fig. 10 *Talud-tablero* profiles: (a) Cacaxtla; (b) Teotihuacan; (c–d) El Tajin; (e–f) Cholula; (g–h) Xochicalco; (i) Teotenango; (j) Chichen Itza; (k–l) Tula. After Gendrop 1984.

what is overtly stated in public monuments and what is demonstrated in other remains.

Teotihuacan is often identified as the other principal source of inspiration for Cacaxtla's monumental arts (Foncerrada de Molina 1980). Closer scrutiny reveals that there is actually little that necessarily came from Teotihuacan. Many symbolic details identified as Teotihuacan-based are motifs that also filtered down into the Southern Maya Lowlands or other areas and that perhaps were carried back into the central highlands. For example, in architecture, the Teotihuacan concept of the *talud-tablero* is transformed at Cacaxtla, as it is elsewhere. At Cacaxtla the *talud* is elongated, forming an almost vertical slope, while the *tablero* is divided into segments with recessed panels (Fig. 10a). The tall, sloping *talud* most closely resembles proportions known from Xochicalco and Cholula (Fig. 10f–h), while the *tablero* panels are reminiscent of the Venus and Eagles Platforms at Chichen Itza and Building B at Tula (Fig. 10j–k). Kubler (1977) has suggested that the Teotihuacan *talud-tablero* profile was adopted and modified at many sites, such as Cholula, Xochicalco, and El Tajin, to serve as ethnic or geographic symbols identifying their builders.

Cacaxtla displays very few Teotihuacan stylistic elements. The most frequently cited Teotihuacan trait is the aquatic border framing the figures in Building A (Fig. 4a, b; Foncerrada de Molina 1978b: 106; Kubler 1980: 166). However, upon closer examination the Building A border seems to be Teotihuacan in concept but not in form, based on Teotihuacan murals known to date. Characteristic of Teotihuacan mural composition is the division of wall surface into a major field surrounded by borders, usually with repeated symbols or fluid, undulating forms often related to water. Although wavy, diagonal lines sometimes with aquatic creatures indicate water at Teotihuacan (Fig. 11; Miller 1973: 136, 144), this device occurs in major compositional fields rather than in border decorations. Teotihuacan border patterns tend to be standardized, geometric and design-oriented, but rarely are they segmented or compartmentalized, as they are at Cacaxtla. Such diagonal divisions of borders do, however, occur in Maya compositions, for example, in Maya pottery (W. Coe 1970: fig. 18a) and in the Palenque Palace stucco reliefs (M. Coe 1980: 98).

The majority of traits identified with Teotihuacan are symbolic or iconographic ones (see Baird, this volume).

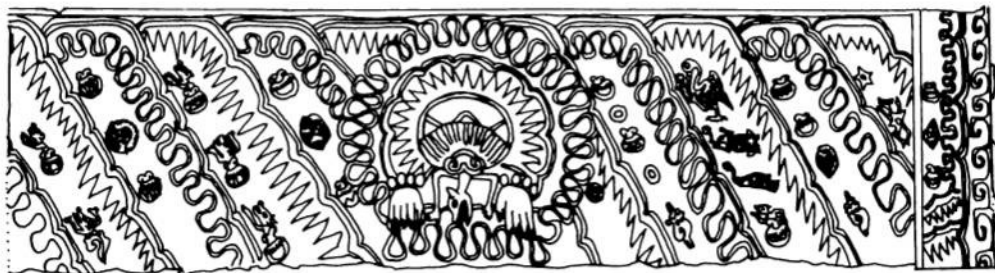


Fig. 11 Drawing of Teotihuacan Mural from Zone 5-A. After Miller 1973: 84.

However, many of these iconographic details also occur in the Southern Maya Lowlands. Given the purely Maya style of the murals, the Maya region rather than Teotihuacan may have been the source for these elements. For example, bird and jaguar costumes, Tlaloc and Tlaloc vessels, feathered serpents, human figures emerging from shells, and the trapeze-and-ray sign all occur both at Teotihuacan and in the Maya Lowlands, but the Cacaxtla versions more closely resemble Maya models in form. For example, the image of an old man emerging from a strombus type shell is a common way of depicting Maya God N, especially in polychrome ceramics (Fig. 12a; Schele and Miller 1986: 54). In contrast, the Teotihuacan version of this deity (Fig. 12b) is depicted in the flat, stiff Teotihuacan style. The old, toothless man emerges from a bivalve rather than a spiral shell, and large volutes issue from his mouth. The Cacaxtla version (Fig. 4b) more closely resembles the Maya prototype in shell type and physiognomy, although the red-headed figure emerging from the shell is not old. Similarly, jaguar or avian hand and footgear are more typical of the Maya region than of Teotihuacan, where human appendages are not replaced by zoomorphic ones but rather are left as human limbs or simply hidden by other objects.¹⁶

¹⁶Maya examples of these costume elements are found in Seibal sculpture (Greene, Rands, and Graham 1972: pl. 107) and in polychrome ceramics, such as the well-known Altar de Sacrificios vase (Robicsek and Hales 1981: fig. 22a).

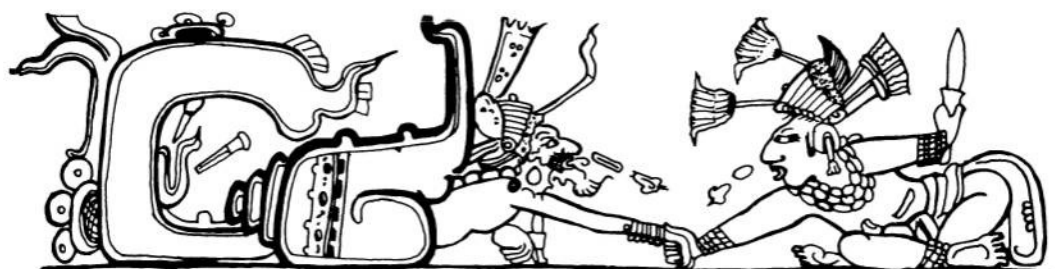
Among the few symbols at Cacaxtla that indeed might have originated at Teotihuacan are the Reptile's Eye glyph and the half star motif, which are not prominent in Maya art (for further discussion see Baird; Berlo, Chap. 2, this volume).

In portable remains there is little to suggest close ties with Teotihuacan. A few ceramic specimens resemble Teotihuacan wares and forms (López de Molina 1980: 297; López de Molina and Molina Feal 1986: 51–69), but it is unclear whether these are local copies or actual trade wares.¹⁷ Miniature obsidian eccentrics from Cacaxtla resemble miniature artifacts found at Teotihuacan and Tula (Stocker and Spence 1974), as well as in other parts of Tlaxcala (Tlaxcala, Regional Museum), but their place of origin is unclear.¹⁸

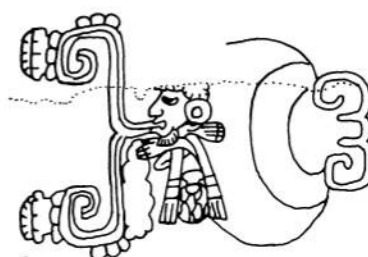
On the basis of monumental and portable remains, it appears that Cacaxtla's ties with Teotihuacan were not strong ones. Very little at Cacaxtla is necessarily of Teotihuacan origin. Considering the site's probable awareness of Teotihuacan as a powerful center, this paucity of Teotihuacan traits is striking. Perhaps this can be seen as a

¹⁷Andrés Santana (personal communication, March 1984) identified these Teotihuacan ceramics as local copies, while the Molinas have not addressed the issue in their latest publication summarizing Cacaxtla ceramics.

¹⁸Unfortunately the source of Cacaxtla's obsidian, both these miniatures as well as many blades and points, has not been determined.



a



b

Fig. 12 Old man emerging from shell: (a) drawing from Maya cylindrical vessel (after Schele and Miller 1986: pl. 118); (b) drawing of Tetitla mural, Teotihuacan (after Miller 1973: 135).

rejection of Teotihuacan models and as a search for others, a theme that will be discussed later in this article.

Of the Oaxacan traits in the monumental arts at Cacaxtla, similarities are entirely glyphic. The use of writing systems in general, dot and tied bar numerals, and specifically the 3 Deer glyph are among the major parallels drawn between Cacaxtla and Oaxaca (Berlo, Chap. 2, this volume; Foncerrada de Molina 1976; Abascal et al. 1976). As pointed out by Berlo, it is not clear that Oaxaca is the source for any of these glyphs or glyphic elements. Oaxaca had a well-developed writing system in the Early Classic period, and glyphs were more prominently used in the central highlands later during the Epiclassic period, but to say that Oaxaca is the origin or the source of impetus of specific glyphs has little basis.¹⁹

Although monumental similarities between Cacaxtla and Oaxaca seem to be only superficial ones, Cacaxtla may have had commercial contacts with Oaxaca. Neutron activation analysis of a few gray ware sherds has suggested that these came from Oaxaca (López de Molina 1980: 198).

Similarly, while there is ceramic evidence of commercial interaction between Cacaxtla and Veracruz, evidence of such contact on the level of monumental artworks is lacking. Some comparisons have been made between architectural profile and decoration at Cacaxtla and El Tajin. López de Molina (1977a: 8) compared Cacaxtla's recessed *tablero* panel (Fig. 10a) with a niche-filled *tablero* at El Tajin (Fig. 10c-d) and also noted the similarities in latticework architectural ornamentation at both sites. At Cacaxtla these diamond patterns decorate walls facing the Patio of the Rhomboids (López de Molina and Molina Feal 1980: 45) and a partition in the Latticed Window Structure (López de Molina and Molina Feal 1980: 50), while an example from El Tajin covers a substructure balustrade (García Payón 1952: pl. XXI). These comparisons are general ones and do not necessarily reflect direct contact. Several stylistic similarities have also been posited between the Cacaxtla murals and Gulf Coast sculpture. Double outlines of certain bodily parts, such as the arm area, have been compared with El Tajin (Abascal et al. 1976: 31),²⁰ as well as the use of specific poses (Kubler 1980: 166), while the profusion of curved lines in some Cacaxtla compositions has been compared with Gulf Coast scrollwork (López de Molina and Molina Feal 1980: 25). Similarly, iconographic parallels are often so general that Veracruz need not be the source; for example, plumed serpents and star eyes appear in other parts of Mesoamerica (Abascal et al. 1976: 31, 40, 41).²¹

Cacaxtla monuments do not provide strong evidence for direct contacts with Veracruz, unlike portable remains, which do attest to commercial interaction. Neutron activation analysis of several nonlocal sherds from Cacaxtla resulted in tentative identifications of northern Veracruz (El

Tajin) or southern Veracruz (Los Tuxtlas, Nappatecutlan, or Potrero Nuevo) proveniences (López de Molina 1980: 298; 1981: 171). Thus, while there is evidence of commercial contact with Oaxaca and Veracruz at Cacaxtla in the form of portable trade goods, these areas did not have an impact on the style and iconography of public monuments.

Cacaxtla's relations with Michoacan and Guerrero are not entirely clear. No connections with the west are apparent in terms of style or iconography of monumental artworks.²² Similarly, no manufactured portable objects, such as Guerrero style figurines, are known from the site. However, it is interesting that some shell species represented in the murals of Building A, as well as a few actual shell specimens, have been identified as Pacific coast species (Polaco 1986). However, the specific source of this long-distance trade item is unknown.

At Cacaxtla there appears to be deliberate manipulation of style and iconography in public monuments. Maya traits predominate in the style and symbolism of public works, while portable goods suggest greater interaction with Oaxaca and the Gulf Coast.²³ Teotihuacan's role appears to be relatively minor both in terms of portable goods and stylistic conventions. It is even possible that the adoption of the Maya style, so different in appearance and content from that of Teotihuacan, was a deliberate rejection of the Teotihuacan visual system.

Xochicalco

The relations between portable and monumental artifacts at Xochicalco are somewhat different. Unlike Cacaxtla, at Xochicalco no single region of Mesoamerica predominates as the source for stylistic or symbolic elements in public monuments. However, like Cacaxtla, areas that seem to be important trade partners do not seem to be sources of artistic inspiration.

There are general Maya parallels with architecture and sculpture at Xochicalco. Elements associated with Maya architecture and sculpture often appear at Xochicalco to be derivative or transformed from their original nature.²⁴ Architectural parallels between Xochicalco and Maya sites include similarities in ball court plan or elevation with Copan, Guaytan, Piedras Negras, and Coba (Noguera 1945: 133; Sáenz 1962: 60), the presence of a sweatbath near residential areas (Litvak King 1972: 62), and general simi-

¹⁹Often parallels have been drawn with Mixteca Baja Nuiñe glyphs (Foncerrada de Molina 1978b: 106; 1978a: 142), but the comparisons with Cacaxtla seem minor. Cacaxtla glyphs are basically representational, while Nuiñe glyphs are more stylized and abstract, less comprehensible to a viewer not trained in the Nuiñe visual system. See Moser (1977) on the Nuiñe writing system.

²⁰Double contours on the body also occur in Maya polychrome pottery (e.g., M. Coe 1978).

²¹Perhaps a more unusual trait associated with Veracruz and the Pacific coastal lowlands as a whole (see Parsons 1969) is the representation of cacao vines and fruit on the polychrome urns from Cacaxtla (Fig. 9a, b). Berlo (1984: 160-162) notes the rarity of cacao representations in Pre-Columbian art and cites examples at El Tajin, the Cotzumalhuapa region, and perhaps some Escuintla incense vessels, as well as some later codices.

²²This may be due in part to the paucity of our knowledge of the monumental arts of the west. See Schmidt and Litvak King (1986) for a synthesis of archaeology in Guerrero.

²³Maya traits have been noted in Epiclassic coastal Oaxacan sculpture and ceramics (Brockington 1974; Long 1974; DeCicco and Brockington 1956) and Gulf Coast pottery and figurines (M. Coe 1965: 706), but Maya traits at Cacaxtla appear in such pure form that it appears unlikely that Oaxaca or the Gulf Coast served as intermediary sources. The Gulf Coast is often cited as the Olmeca-Xicalanca homeland (Jiménez de Moreno 1966), but there is no known site with similar remains in the Gulf region.

²⁴For further discussion of a similar transformation process, see Berlo (1984).



Fig. 13 View of Xochicalco Stela 1, Museo Nacional de Antropología, Mexico. Personal photo, published courtesy of INAH, Mexico.

larities in acropolis plan, restriction of access, and hilltop location (Litvak King 1970: 138; Kubler 1984: 68).

Sculptural parallels also suggest Mayoid traits adapted into the local visual idiom. One possible exception is a three-dimensional stone guacamaya head found in the ball court at Xochicalco (Museo Nacional de Antropología 1986: no. 111). It resembles ball court markers known from the Maya region (e.g., Stromsvik 1952: fig. 29b; Noguera 1945: 134; Litvak King 1972: 62). Three pillarlike monuments carved on all four sides with glyphs and other symbols have been called “stelae,” monuments typical of the Maya region (Fig. 13; Kubler 1984: 73). However, the shape and composition of these monuments differ from Maya stelae.

Perhaps the most frequently cited evidence of Maya “influence” at Xochicalco are the cross-legged figures on the lower platform of the Pyramid of the Plumed Serpent (Fig. 14; Seler 1960: 158; Litvak King 1970: 137). This figural type occurs frequently in Maya portable artifacts, such as greenstone pendants and polychrome pottery (Fig. 15a, b) and only rarely in monuments (e.g., Bonampak engraved stone, M. Coe 1980: 95).²⁵ A comparison of Xochicalco and Maya versions of this posture reveals a greater rigidity at Xochicalco, while Maya examples give a greater impression of movement created by diagonal axes formed by shoulders and spine. This stiffness, along with the standardization in size, posture, and costume of these figures at Xochicalco implies a lack of familiarity with this



Fig. 14 Seated Mayoid figure from the lower *talud* of the Pyramid of the Plumed Serpent, Xochicalco. Personal photo, published courtesy of INAH, Mexico.

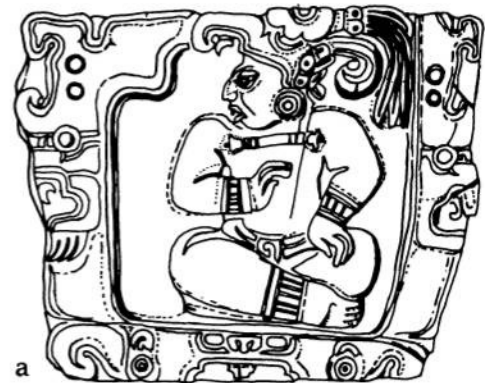


Fig. 15 Drawings of Maya seated posture from (a) greenstone plaque, Chichen Itza (after Proskouriakoff 1974: 180, #1) and (b) cylindrical vessel (after Robicsek and Hales 1981: #88).

mode of representation. It suggests perhaps a need to follow models in order to duplicate an unusual composition, one that may have been new to their visual vocabulary.

Certain Maya symbols of authority are used in reliefs at Xochicalco. For example, the Tlaloc with trapeze-and-ray

²⁵See V. Miller (n.d.: 239; 195–197) on this pose in the Maya region.

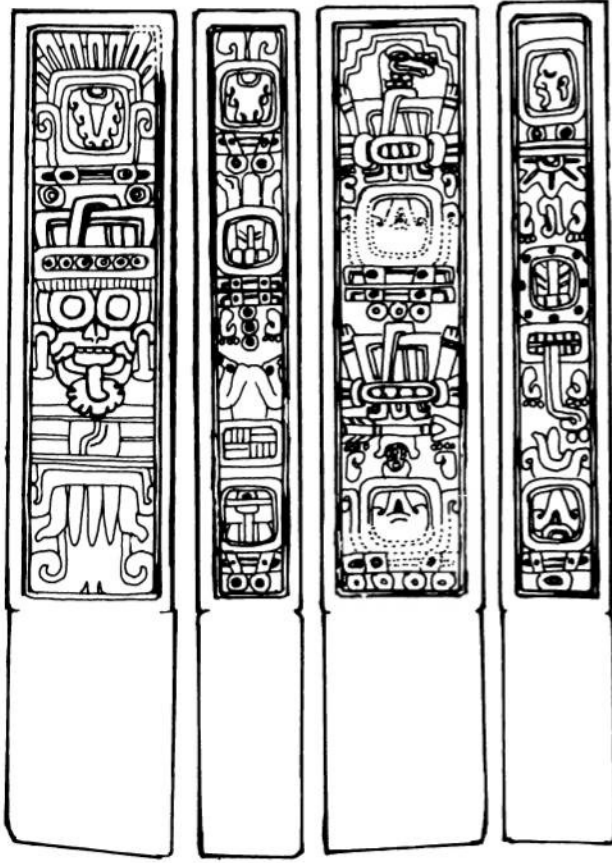


Fig. 16 Drawing of Xochicalco Stela 2 rollout. After Pasztory 1976.



Fig. 17 Seated figure with Trapeze-and-Ray sign headdress, Pyramid of the Plumed Serpent *tablero*, Xochicalco. Personal photo, published courtesy of INAH, Mexico.

sign headdress, linked with dynastic or warrior contexts in the Southern Maya Lowlands (Pasztory 1988; Berlo n.d.; Stone, this volume), appears on Stela 2 (Fig. 16) and repeatedly on the Pyramid of the Plumed Serpent *tablero* (Fig. 17). However, at Xochicalco these figures do not bear weapons, but rather hold bags. Numerous glyphic



Fig. 18 Greenstone plaques with frontal figures from Xochicalco. Museo Nacional de Antropología, Mexico. Personal photo, published courtesy of INAH, Mexico.

comparisons have also been posited, but due to the basic geometric structure of several glyphs, it is unclear whether such formal similarities are purely coincidental, or whether there was any relation in meaning as well.²⁶ (For further information on Xochicalco glyphs, see Berlo, Chap. 2, this volume.) Specific Maya symbols or the use of complexes revealing knowledge of underlying organizational concepts are not evident in these Mayoid references at Xochicalco. Rather, Maya traits—architectural, stylistic, and iconographic—have been adapted to blend with the local visual system.

Although portable artifacts, such as Maya polychrome pottery or greenstone plaques, could have been the models for the Pyramid of the Plumed Serpent reliefs, no such objects have been found at Xochicalco. Greenstone plaques, found in excavations in the Acropolis area, depict frontal figures with serpent maw headdress, large beaded collar, and arms bent with hands clutched symmetrically over the chest (Fig. 18; Sáenz 1961, 1963, 1964, 1967). Stylistically, their closest parallels are similar plaques found at Monte Alban during phases IIIb and IV (Paddock 1966: 158, 159), Tula (Diehl 1983: pl. 51; Caso 1965: fig. 29),

²⁶Maya glyphs bearing a close resemblance to Xochicalco glyphs include *kin*, basically an x-shaped cross; *kan*, a Greek cross; and *pop*, an interlace or mat fragment (Litvak King 1972: 58, 64; Sáenz 1961: 60). The Maya *cauac* glyph has been compared with a Xochicalco glyph with pendant droplet-like forms, suggested to represent rain (Caso 1962: 57), while descending or decapitated figures have been noted at Copan and Xochicalco (Sáenz 1961: 54). Although not similar in form, the Maya glyph *etznab* symbolizing flint, has been compared with a Xochicalco glyph that appears to represent an arrow point (Caso 1962: 57).

Nebaj (Smith and Kidder 1951: fig. 52g), Palenque (Sáenz 1956: pl. 20), Chichicasteñango, and San Salvador (Digby 1964: pl. xiv, c). The source of these widely dispersed plaques is not known, although they are often described as Maya (Digby 1964: 25, pl. xiv; Caso 1965: 906–908) or Mixtec (Caso 1965: 908) in style. More elaborately carved plaques are known from Maya sites such as Chichen Itza (Proskouriakoff 1974: 165, 167, 185), Nebaj (Smith and Kidder 1951: figs. 52d, 59a), and Copan (Digby 1964: figs. 31–32). Whether these Xochicalco plaques constitute evidence of Maya contact is unclear at this point.

Although numerous references have been made to similarities between Xochicalco and Maya ceramics (Noguera 1945, 1947; Sáenz 1964; Litvak King 1972), it appears that many of these identifications are based on preconceived assumptions rather than on true ceramic homologies or identities (see Ball 1983). Aspects of vessel shape (Z-angle basal flange and hollow supports) or decoration (stamped or incised figural motifs) are the most frequently cited “Maya” characteristics of Xochicalco ceramics. However, of the thousands of sherds analyzed in Kenneth Hirth’s Xochicalco Mapping Project, only one sherd was possibly “Maya” (Hirth n.d.: 243). Furthermore, Ann Cyphers Guillén (personal communication, March 1985) considers the evidence for Maya influence in ceramics as unsubstantiated and weak.

Ties between Xochicalco and Teotihuacan are more clearly demonstrated in monuments and portable artifacts. Certain Teotihuacan concepts seem to be adopted in Xochicalco monuments without any attempts to emulate the original form or context of these traits. In architecture, for example, the Teotihuacan *talud-tablero* is transformed; the Xochicalco version consists of a tall, sloping platform with a plain or decorated *tablero* sometimes surmounted by a short, everted cornice (Fig. 10g–h). More conventional Teotihuacan *talud-tablero* proportions appear in low relief on Stelae 1 and 3 as glyphs, but it is not clear that specific reference to Teotihuacan is intended.

Xochicalco sculptures display Teotihuacan iconographic traits but few stylistic ones. The sole exception is a stone Huehuetotl brazier, found on the floor of Structure A at Xochicalco and identical to types found at Teotihuacan (Sáenz 1961: fig. 12). More common at both sites is a shared vocabulary of symbols (Litvak King 1970: 135; Sáenz 1961; Pasztory 1976). Teotihuacan signs, such as heart, blood, Reptile’s Eye, hands, and teeth, are incorporated at Xochicalco into a visual system that relies more heavily on glyphs and calendrical dates than the Teotihuacan system, which was rooted in figural imagery combined with symbols, as discussed by Berlo (Chap. 2, this volume). As Pasztory (1976: 205) has observed: “It is as though the vocabulary of Teotihuacan were being used [at Xochicalco] to create sentences in a different language.” Perhaps these Teotihuacan symbols were used for convenience and basic comprehensibility, because there is no evidence of deliberate imitation of Teotihuacan art forms at Xochicalco. Rather, certain symbols continued and took on more explicitly defined meanings, as the Xochicalco visual language became greatly enriched and embellished

with the addition of many other signs, which were often esoteric as opposed to representational in nature.

Teotihuacan luxury and utilitarian goods occur in low frequency at Xochicalco and in the western Valley of Morelos (Hirth 1980: 59; Hirth and Angulo 1981). A few Epiclassic ceramic types resemble late Teotihuacan wares (Litvak King 1970: 132–133; 1972: 58–59; Noguera 1945: 143, 149–150), but these were locally produced (Hirth and Angulo 1981: 142–143, 148; Hirth n.d.: 289). Otumba, one of the central Mexican mines controlled by Teotihuacan during the Classic period, was still one of the four principal obsidian sources for Epiclassic Xochicalco (Hirth n.d.: 314), but it is unclear what polity was controlling this source.²⁷

It appears that Teotihuacan was neither an important trading partner nor an influential center for Xochicalco’s artistic emulation. Litvak King (1970) has suggested that the relationship between Teotihuacan and Xochicalco was a competitive one; he posits that Teotihuacan’s decline was due in part to Xochicalco’s cutting off the city’s southern trade routes. Xochicalco made no obvious attempts to preserve Teotihuacan artistic traditions. Rather, it appears that Xochicalco was trying to develop its own style, taking symbolic and glyphic elements from a variety of sources, without allowing any single source to predominate.

In contrast to the nature of Xochicalco–Teotihuacan relations, both monumental and portable remains attest to interaction with Oaxaca. Architectural comparisons include similarities in the plan of Structure A with Monte Alban’s System IV and Mound M (Litvak King 1972: 61), between ball courts at Xochicalco and Yucuñudahui (Litvak King 1972: 62), and in the use of an upper cornice in building profiles (Litvak King 1970: 136). Similarities in plan may reflect comparable functional needs rather than direct cultural contacts, while Xochicalco’s slightly flaring cornice more closely resembles El Tajin architectural profiles (Fig. 10c, d, g, h; Kubler 1984: 70, 478). The majority of Xochicalco traits linked with Oaxaca are Zapotec-type glyphs (Breton 1906; Caso 1962). From the Early Classic period, monuments at Monte Alban and other Oaxacan sites prominently displayed a well-developed glyphic system. It appears that numerous elements from this system were adopted at Xochicalco to record place names and dates (see Hirth; Berlo, Chap. 2, this volume).

Oaxacan ceramics have been identified at Xochicalco by numerous investigators (Litvak King 1970: 132–133; Noguera 1945: 143, 147, 150; Sáenz 1962: 78–80; Hirth n.d.: 243). These remains testify to some type of commercial interaction, although possibly Guerrero served as an intermediary trading partner (Kubler 1984: 68). Thus, at Xochicalco selective Oaxacan traits, principally glyphic ones, were incorporated into the iconography of public monuments, and at the same time there is evidence for commercial ties. This situation contrasts with that of Maya and Teotihuacan relations, where portable materials attesting to elite or commercial ties are lacking.

Although Xochicalco received trade goods from Vera-

²⁷The other main Epiclassic obsidian sources were Zinepecuaro (Michoacan), Veracruz (exact source not determined), and Cerro de las Navajas (Hidalgo) (Hirth n.d.: 314).

cruz, the region generated little inspiration for Xochicalco's monumental arts. A few isolated stylistic features of Xochicalco monuments have been compared with Veracruz, including the use of a scroll pattern as architectural ornament (Sáenz 1962: 78), the proportions and form of the *talud-tablero* profile (Fig. 10c, d, g, h; Kubler 1984: 70, 478), and the lattice decoration as architectural and sculptural decoration (Litvak King 1970: 137). However, it is often unclear whether Veracruz is actually the source for a given trait. For example, Totonac volutes are known from earlier and later contexts, at Teotihuacan and Tula respectively, but it is difficult to determine whether Veracruz was consistently the area of origin.

Both ceramics and obsidian from Veracruz have been found at Xochicalco.²⁸ Small quantities of fine paste wares at the site indicate some type of commercial interaction (Hirth n.d.: 243).²⁹ A source in Veracruz was identified as one of Xochicalco's four principal suppliers of obsidian (Hirth n.d.: 314). Thus, like Oaxaca, Veracruz was in commercial contact with Xochicalco, but Xochicalco chose not to adopt highly visible references to its ties with Veracruz in the public artwork at the site.

Portable remains suggest that Xochicalco was in contact with Guerrero and Michoacan.³⁰ According to Hirth (1984: 581), the Xochicalco interaction sphere included not only western Morelos, but also part of eastern Guerrero. One of the major nonlocal ceramic types at Xochicalco is believed to be from Guerrero (Hirth n.d.: 243; Hirth and Angulo 1981: 142–143). In addition, numerous greenstone figurines, described as Teotihuacan-Guerrero, Teotihuacan-Mezcala, or Mezcala style, have also been found at Xochicalco in offerings and burials (Fig. 19; Sáenz 1961, 1963; Noguera 1961). These figurines were probably acquired from Guerrero, considering Xochicalco's known relations with the west. The Zinepecuaro mine in Michoacan was one of the four principal obsidian sources for Epiclassic Xochicalco. Furthermore, remains of shells found at Xochicalco have been identified as Pacific Coast varieties (Litvak King 1972: 65; Oscar Polaco, personal communication, June 1985), although the precise area of the coast has not been determined. Guerrero has also been suggested as the source or intermediary for many of the so-called Maya traits at Xochicalco (Kubler 1984: 68). Maya false arches and fine orange ceramics constitute the principal

²⁸Other portable objects possibly associated with Veracruz are two plain yokes and a three-dimensional stone *hacha* depicting a hand on a decapitated head, found with other nonlocal artifacts in the Offerings Chamber of Structure A (Sáenz 1961). Most plain yokes have been found outside of Veracruz (Sáenz 1962: 44), so that these ball game items may not have come from Veracruz at all.

²⁹In earlier reports, numerous parallels were drawn between Xochicalco and Veracruz ceramics, but it is not clear whether these are traded wares or copied types (Noguera 1945: 148, 151; 1947: 291; Sáenz 1962: 78–80; Litvak King 1972: 61).

³⁰Some comparisons have been made between Xochicalco and Guerrero monuments, but similarities are based on glyphs or symbols used throughout Mesoamerica, such as the blood or heart sign (Texmelincan relief; Caso 1962: 69), the water glyph (Piedra Labrada; Caso 1962: 66), the "ollin" or movement glyph (Chilpancingo relief; Caso 1962: 57), and a "xi" sign resembling a serpent's tail (Cerro de los Monos monument in Hendrichs 1946; Caso 1962: 63). For more on these glyphs that have a widespread Epiclassic distribution, see Berlo, Chap. 2, this volume.



a



b

Fig. 19 (a) Mezcala and (b) Teotihuacan-Mezcala style greenstone figurines from Xochicalco. Museo Nacional de Antropología, Mexico. Personal photo, published courtesy of INAH, Mexico.

Maya cultural characteristics in Guerrero (Schmidt 1977; Schmidt and Litvak King 1986: 39–40).

This general overview of the nature of nonlocal interaction at Cacaxtla and Xochicalco shows two very different solutions to the problem of developing a new public art style during the period following Teotihuacan's decline. The comparison and contrast of monumental and portable evidence demonstrates that artistic ties often do not correlate with commercial or political ones but rather can be independent of sustained social contacts. I suggest that such choices were motivated principally by ideological concerns and that selections were made with a certain degree of historical consciousness, especially with regard to Teotihuacan. During this period of decentralization, artistic diversity and innovation are the result of an introspective process on the part of emerging regional polities. This new artistic policy involves a reassessment of great styles of the recent past and the present. The goal is to find an appropriate way to proclaim visually the identity of their new political authority. The way this is achieved differs at each site.

DISCUSSION AND CONCLUSIONS

Certain major trends emerge from the preceding section. At both Cacaxtla and Xochicalco it appears that major

trading partners, principally Oaxaca and Veracruz in both cases and Guerrero-Michoacan for Xochicalco, did not have a major impact on monumental arts. At Cacaxtla very little can be identified with Oaxaca or Veracruz, while at Xochicalco it appears that Oaxaca was an important source of glyphic inspiration. At neither Cacaxtla nor Xochicalco is there any overt attempt to preserve Teotihuacan artistic traditions. Certain Teotihuacan symbols continue; however, because they occur in isolation, removed from the context of a body of other Teotihuacan signs, I suggest that the motivation for their use was a concern for facile comprehension rather than conscious emulation. By means of looking outward, looking away from Teotihuacan to other areas, both Cacaxtla and Xochicalco were, in effect, shunning Teotihuacan art as a model and were attempting to develop art styles very different from the metropolitan Teotihuacan style that dominated the previous period. As part of this process, it is implicit that there was considerable awareness of different stylistic and symbolic systems throughout Mesoamerica. Such an awareness might have been achieved through the movement of people who saw monuments *in situ* and who described their impressions upon return to their home region, the movement of artists themselves, or the movement of portable goods in nonlocal styles (Robertson 1985). One of the most prominent sources of influence cited at Cacaxtla and Xochicalco is the Maya style, perhaps the most antithetical to the Teotihuacan style in both form and content.³¹ The Maya style may have been particularly attractive precisely because of these strong differences.

The point of divergence for the two sites is the way that each incorporated nonlocal elements into public monuments. While Cacaxtla adopted the Maya style and its symbolic system to communicate local ideas with only minor additions from other systems, Xochicalco was much more selective in its eclecticism. It drew on elements from various sources, including Oaxaca, the Maya region, and Teotihuacan, and combined them to form a new and distinctive style.

To clarify general processes of artistic eclecticism at Cacaxtla and Xochicalco, the following questions will be examined: (1) When does artistic receptivity occur? What are the sociopolitical conditions that permit and stimulate it? (2) Why does eclecticism occur? (3) How are art styles and symbolic systems manipulated? How are they successful or unsuccessful as political tools?

Mere contact between two or more groups does not necessarily result in changes in monumental art styles. Social, political, economic, and intellectual factors influence the climate of the time and can impede or promote receptivity. For example, during the Classic period there is widespread awareness of the Teotihuacan style in different parts of Mesoamerica (Pasztory 1978; Marcus 1983; Berlo

1984). Outside the great metropolis, the Teotihuacan style is often juxtaposed with the local style within the same monument or artifact: a Teotihuacan style figurine is found inside a Maya style vessel in a cache at Becan (Ball 1977); a Teotihuacan style human figure is shown next to an anthropomorphic feline in the Zapotec style on the Bazan slab from Monte Alban (Marcus 1983: 179); two Teotihuacan style figures flank a central Maya ruler on Tikal's Stela 31 (W. Coe 1970: 49); in Escuintla, cylindrical tripods, style, and iconography of Teotihuacan, Maya, and Veracruz origins are combined (Berlo 1984: 118–120).

Although Teotihuacan was the recipient of many foreign goods, only rarely does a foreign art style appear to affect Teotihuacan art.³² When nonlocal styles occur at Teotihuacan, they commonly occur in foreign residences at the site. For example, Zapotec style stone carving and urns are found in the Oaxaca barrio at Teotihuacan (Millon 1973: figs. 58–60; Paddock 1983). More frequent is the adaptation and transformation of foreign traits to conform with the Teotihuacan stylistic and symbolic system. For example, the concept of the bearded man emerging from a strombus shell is purely Maya (Fig. 12a), but in the Teotihuacan representation of this form at Tetitla (Fig. 12b), the composition, pose, and execution conform to Teotihuacan stylistic canons and even the Maya strombus is replaced by the ubiquitous Teotihuacan bivalve. Similarly, Mayoid poses and glyphlike elements occur in Tetitla's murals (Villagra 1954), yet these murals are still executed within the canons of the Teotihuacan style.

Just as the adoption of Teotihuacan traits in other regions was a deliberate choice with a particular function, Teotihuacan resistance to the adoption of foreign traits can be seen as a purposeful choice. Teotihuacan's repetitive, rigid, state-sponsored style had little flexibility or need for foreign input.³³ Kubler (1980) suggests that the inhabitants of Cacaxtla made intentional stylistic and iconographic choices aimed at social and political unification, in which prevailing religious and political views of the time were coalesced in order to fill the void left by Teotihuacan. Oriana Baddeley (1983) also hints at ideological and tactical motivations at Cacaxtla by proposing the deliberate manipulation of other visual systems in the decision of Cacaxtla patrons to adopt the style of the Maya, their "cultural betters."

Comparative situations in other areas of world art suggest that various conditions promote an artistic environment receptive to nonlocal input into public monuments. When a powerful center, highly influential in economic, political, religious, and artistic matters, exists, areas considered marginal or "provincial" are often more receptive to nonlocal stimuli than the capital (Berlo 1984: 211–215). Berlo appropriately compares the reaction of provincial

³¹The Maya style is characterized by asymmetrical compositions, varied and active gestures, poses and spatial organizational axes often dominated by diagonals, naturalistic renditions of human, animal, and mythological creatures, and elongated bodily proportions. On the other hand, the Teotihuacan style is predominantly symmetrical in composition, static and patterned in pose and gesture, rectilinear in organization, and squat in proportions. The dynastic and historical content of most Maya monuments forms a dramatic contrast with the repetitive, nameless, ahistorical imagery of Teotihuacan.

³²Berlo (1984: 215) also notes the minimal impact of foreign styles at Teotihuacan. She suggests an experimentation in murals with glyphic forms and a greater complexity in imagery may have resulted from Maya influence. For nonmonumental artifacts, she mentions some Veracruz influence in ceramic decoration. For further information on evidence of Veracruz interaction at Teotihuacan, see Rattray (1977) and Rattray and Ruiz (1980).

³³See Berlo (1984: 211–216) for discussion of metropolitan and provincial art styles and the varying degrees of receptivity manifested by each.

areas to the influence of Rome and Teotihuacan, predominant centers of their respective times. In periods of decentralization and regional autonomy, no single center has the "vitality" to impose itself on others or to be considered superior and worthy of emulation (Crispoliti 1961: 546). These are generally phases of cultural transition, periods of critical reevaluation of previous phases. Sometimes this process occurs in regional political capitals, centers of expanding empires attempting to "assimilate as many facets of their world empire as possible" (Crispoliti 1961: 538, 544, 546). At other times it is confined to peripheral or border areas, which are zones of political instability, often open to extensive foreign contacts due to their strategic commercial location as areas of passage.

Xochicalco and Cacaxtla were marginal, both geographically and temporally, to Teotihuacan's Classic period sphere of influence. Neither played an important role in Teotihuacan's trade routes, and neither site yielded significant materials to indicate direct relations. Although both sites overlapped chronologically with Teotihuacan, both reached their apogees after Teotihuacan was no longer the predominant center of commercial, political, religious, and artistic influence.

In fact, the Epiclassic period may have been a time of deliberate rupture with Teotihuacan traditions. Evidence of selective destruction and burning of the great Classic period center suggests that its final end was a violent one (Millon 1973). Even if the result of an internal revolt, the end of Teotihuacan would have been a major event affecting areas far beyond the site itself; cultural traditions associated with Teotihuacan would not continue as if the site's destruction had never happened. As an aftermath of such an event, an atmosphere of critical evaluation of the past would come as no surprise. The prominence of defensive works found at Epiclassic sites attests to the prevalence of intersite competition. Cacaxtla and Xochicalco were probably local capitals of expanding polities within their respective regions. Likely concerns would have been political and economic consolidation as well as expansion of the center's sphere of influence.

Only general answers can be posited to address the issue of what messages were communicated by public artworks. Much of the imagery at Xochicalco and Cacaxtla overtly glorifies bellicosity, conquest, and sacrifice. Although armed figures and bleeding sacrificial hearts are depicted at Teotihuacan, it would be difficult to describe Teotihuacan imagery as heavily militaristic. During the Epiclassic period, however, armed figures, confrontation, conquest, and sacrifice are prominently displayed themes. Such aggressive imagery may have been both an exhortation and a warning, necessary under unstable political circumstances of decentralized authority.

On another level, I am proposing that monuments were read both iconographically and stylistically. Viewers of the time recognized, at least in part, some of the artistic references made in the artworks. The adaptation and manipulation of stylistic or symbolic systems, as observed in the cases of Cacaxtla and Xochicalco, attest to considerable knowledge of nonlocal styles during both the Classic and

Epiclassic periods in Mesoamerica. Public artworks during this unstable period were intended to communicate the image of cosmopolitanism that these political centers hoped to achieve, rather than representing an empire already consolidated.

Given the conditions of receptivity permitting nonlocal contributions to affect monumental art, why does a polity incorporate nonlocal elements? The role of eclecticism can be seen from several different perspectives. Emulation of one's economic, political, and cultural betters is frequently assumed to be the case (Flannery 1968). In such instances the resulting eclecticism is generally a mix of a local style and one nonlocal style regarded as superior and therefore desirable, rather than a multiplicity of nonlocal ones. However, there are other possible dimensions. Eclecticism in public monuments could express the diversity and extent of a site's ties with other powers. This brand of scattered, selective borrowing from a variety of far-flung sources seems to describe most appropriately the nature of Xochicalco's imagery. These relations could be real, but they could also be fictive, desired ones (cf. Winter 1981, 1985).

The adoption of a nonlocal style could also be interpreted as a symbol of humiliation and conquest. At the Late Classic Maya site of Tonina, one monument depicts Palenque ruler Kan Xul as captive and is carved in the style of Palenque, rather than in the three-dimensional style of Tonina (Becquelin and Baudez 1982: 1353–1355; Schele and Miller 1986: 219). Similarly, at the nearby site of Palenque, irregularly shaped prisoner reliefs from House A of the Palace are executed in a variety of styles; to explain this diversity, it has been suggested that these slabs came from other sites conquered by Palenque (Baudez and Mathews 1979: 35). In both cases, perhaps such monuments depicting the defeated ruler in a position of humiliation were given as tribute to the conquering center. This pattern is also seen at Piedras Negras, where Stela 12 proclaims victory over Pomona and at the same time is executed in the style of the defeated site (Schele and Miller 1986: 40, 142, 218–220). The possibility remains, however, that the process was a purely symbolic one: the "capture" or "defeat" of a site was symbolized by both the capture of its ruler and temple as well as its public art style. This model appears more appropriate to explain the overriding adoption of the Maya style at Cacaxtla.

A similar process is illustrated in a later period by the public monuments of Tenochtitlan. The Mexicas adopted many styles in public monuments in the service of the glorification of the state. They drew on both contemporary Late Post-Classic stylistic sources as well as on older ones. It has been suggested that conquered towns were at times required to pay tribute to Tenochtitlan in the form of monumental sculpture (Bobry in Pasztory 1983: 153) or architecture (Ixtilxochitl 1952: 281).³⁴ However, more numerous are Mexica works that appear to be based on "antique" sources, namely, Teotihuacan, Xochicalco, or Toltec models (Umberger 1987). The Tlaloc-Huehueteotl brazier from the Templo Mayor excavations is an elabora-

³⁴I thank Frederick Hicks for this reference to Ixtilxochitl.

tion and transformation of the Teotihuacan concept (Pasztory 1983: 176), while references to Xochicalco include a Mexica jade plaque carved to imitate the figures on the Pyramid of the Plumed Serpent (Batres 1902: 24) as well as the use of glyphs in the style of Xochicalco (Umberger 1987). Numerous references to Toltec art include Chacmools, bench reliefs, and Tlaloc vessels. However, the Mexica imitate and transform their antique models to create new and unique monuments to exalt the Mexica state. By using elements of great styles from the past, and elaborating upon them, the Mexicas advertised their roots and also proclaimed their supremacy over their predecessors and their contemporaries.

Thus the adoption of foreign stylistic or iconographic traits potentially served multiple functions. It was a means of emulating one's cultural betters in order to become more closely identified with a superior authority. It was also a way of expressing far-flung ties—a visual form of name-dropping. At the same time, the adoption of a nonlocal style could be interpreted as a symbol of supremacy and conquest, in which the real or mythical adversary is subjected to the ultimate humiliation of using its own artistic style to proclaim the superiority of its competitors.

How were style and symbolism manipulated and to what extent was the process successful? At Xochicalco the "best," that is, the most useful, elements from different areas were selected and melded with other nonlocal traits to form a distinctive style. By choosing traits from different visual systems, Xochicalco proclaimed its cosmopolitanism to communicate a public image of broad intellectual, commercial, and political horizons. Xochicalco's sophistication is further revealed in the highly structured and conceptual nature of its internal architectural organization (Hirth 1984; n.d.) and of its art style.

The absence of Maya glyphs at Cacaxtla has been cited as evidence of the stylistic modifications made to suit Central Mexican patrons and audience (Robertson 1985). But in reality, considerable "hidden" meaning, specifically Maya in origin, has been encoded into the murals. The Tlaloc mask and trapeze-and-ray headdress, triple knot, and tied rope collars in the Cacaxtla murals are examples of Maya symbols with highly specific meanings that may well have eluded the Central Mexican viewing public. Clearly the naturalism, immediacy, and violence of the battle scene would have communicated a general message glorifying warfare and sacrifice, but some of the subtleties expressed by costume and insignia might have gone unnoticed. The murals of Cacaxtla were perhaps a daring experiment in public expression that backfired during the unstable times following Teotihuacan's decline. The fact that earlier paintings may have been covered over when still incomplete and that the paintings of Building A and B were carefully buried in sifted earth to be preserved and protected attest to their special status. After the Epiclassic period, Cacaxtla was largely abandoned and was soon forgotten.

In contrast, Xochicalco continued to be an important ceremonial focus for later groups, especially the Mexicas. Many of its eclectic monuments have survived for centu-

ries and are still witness to the power of their makers. Xochicalco's rulers were successful in their attempts to develop an art style suitable to represent their new political identity. This can perhaps be attributed to the brand of eclecticism that they selected in which no single stylistic or iconographic source overpowered the others. Rather, traits from diverse Mesoamerican regional traditions were melded to form a new, distinctive, and enduring style.

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Stars and War at Cacaxtla

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INTRODUCTION

THE CACAXTLA MURALS are a mixture of styles and motifs from such disparate sources as the Maya, Teotihuacan, Xochicalco, Oaxaca, and the Gulf Coast. The extensive use of the Maya style and motifs in a Central Mexican mural is unique to Cacaxtla. There are two sets of murals, each distinctly different in composition yet consistent in style. The murals of Structure A are calm and tranquil; only four full figures are depicted. In contrast, the murals of Structure B are among the most graphic scenes of bloody conflict; many figures are depicted, and they are often in positions that imply action or completed action (see Vol. Figs. 1–2). The scene is incredibly gory: blood and guts spill freely from open wounds. On the basis of style and radiocarbon dates reported in association with the murals, the paintings are thought to date between A.D. 655 and 835.¹ During this era, Cacaxtla is thought to have been occupied by the Olmeca-Xicalanca (Armillas 1946; Kubler 1980: 164), a people of probable Gulf Coast origin, particularly the southern Veracruz-Tabasco area.

The complex mural style and the uncertain cultural affiliation of the artists have caught the imagination of scholars and have led to much generalization and speculation. Individual motifs of the murals have not often been subjected to the rigorous analysis that might be expected to yield more specific information. This study begins by focusing on the Teotihuacan-derived half stars depicted alongside

one of the major figures in the Structure B murals (Fig. 6). Initially the purpose of this study was to determine if the original meaning of one of the mural's Teotihuacan motifs continued or was altered; was there disjunction or continuity?² Analysis of the star motif reveals its historical depth at Teotihuacan and its use as part of a complex of associated motifs both in Teotihuacan and Maya art.

A study of the star in Teotihuacan art indicates that its meaning changed over time; initially found exclusively in aquatic contexts, the star later acquired death, war, and sacrificial associations. The latter is consistent with its use at Cacaxtla and indicates continuity of meaning. At Teotihuacan the star motif occurs frequently and in contexts in which its meaning is readily apparent. At Cacaxtla the motif is infrequently depicted and takes on a glyphic appearance. The relationship of the star to the scene is not explicit and at first seems to be merely tangential, even decorative and insignificant. Analysis of the use of the star-shaped motif at Teotihuacan and the contexts in which it is used reveals its significance at Cacaxtla. It further suggests that other glyphic elements at Cacaxtla may be concise visual statements which derive their appearance and meaning from more complete and complex scenes at Teotihuacan.

Outside of Teotihuacan, the star is also found in Maya art with similar bellicose connotations which become stronger and more explicit in the Late Classic (ca. A.D. 700–900). During this time disjunction occurs as the Teotihuacan star is transformed and absorbed into a Maya star motif which becomes part of the Maya shell-star glyph associated with death, war, sacrifice, and Venus. The shell-star glyph is often found in association with a specific set of costume elements worn by Maya warrior-rulers (Schele and Miller 1986: 213). At Cacaxtla the victorious warrior wears a similar set of costume elements. The contextual similarity suggests that the broader significance of the Cacaxtla scenes may be extrapolated from comparable Maya images and accompanying glyphic notations.

The Structure B mural is usually referred to as a battle scene because warriors and bloodshed figure prominently. Yet only one pair of warriors continues to fight. The scene is not of a battle but of its aftermath and attendant ritual

The research for this paper was begun under the auspices of Dumbarton Oaks during a summer seminar on cultural adjustments after the fall of Teotihuacan (1984). I am most grateful to the Trustees of Harvard University and the staff of Dumbarton Oaks for providing me with this opportunity. I thank my colleagues at the Dumbarton Oaks seminar, Joseph Ball, Janet Berlo, Richard Diehl, and Jeff Kowalski, for so generously sharing their ideas, insights, information, and good humor. I also want to thank Debra Nagao for giving me information on Cacaxtla and providing useful and constructive criticism of this paper. Support from the University of Nebraska-Lincoln Research Council was also provided. Except where otherwise noted, I have made the drawings of the Cacaxtla murals based on the Foncerrada 1982 drawings and my own photographs and observations of the murals.

¹Abascal puts them at A.D. 600–750, coeval with the declining years of Teotihuacan (1976: 47–49); Foncerrada dates them to A.D. 700–900, immediately preceding and following Teotihuacan's demise (1978a: 92). Three radiocarbon dates have been reported in association with the paintings: A.D. 755 ± 75 years, wooden lintel, Structure A; A.D. 744 ± 91 years, level xviii, substructure, Structure B; A.D. 649, ± 93 years, level x, substructure, Structure B (López de Molina 1981: 173).

²For a discussion of disjunction see Kubler 1967: 11–12.

sacrifices. Blood, the ways in which it was obtained and the need for obtaining it, appears to be the central theme. Blood glyphs abound, their meaning paralleled by the actual spilling of blood. In the Structure A murals, the references are to sacrifice and water, not blood. Structures A and B are linked by the cast of characters depicted and by the parallel emphasis on two essential, life-sustaining liquids: blood and water. The iconography as well as the style used at Cacaxtla seems to be Maya-derived and seems to have as its subject the significance (even necessity) of ritualized bloodshed.

PREVIOUS STUDIES OF CACAXTLA'S MURALS

Since their discovery, the Cacaxtla murals have been the subject of great speculation, much of it focused on the means by which Maya style was introduced into the Cacaxtla area, the probable significance of Maya style in the Central Highlands, the identity of those depicted, and the significance of the motifs. The eclectic nature of the murals has been noted by all. Significant studies of the murals have been undertaken by Abascal, Dávila, Schmidt, and Z. de Dávila (1976), Foncerrada de Molina (1976, 1978a, 1978b, 1979, 1980, 1982), Kubler (1980), López de Molina (1977, 1979a, 1979b, 1980, 1981, and with D. Molina 1976, 1980), McVicker (1985), Quirarte (1983), and Robertson (1985), among others.

Abascal et al. (1976) and Foncerrada (1976) note the eclectic nature of the murals and suggest that sources for the motifs are to be found in the art of the Maya, Teotihuacan, Xochicalco, El Tajin, and Oaxaca. Foncerrada hypothesizes that the Maya features were transmitted to Cacaxtla through Teotihuacan art, perhaps transmitted by the Putun, a Mexicanized Maya group of traders (1980: 194). George Kubler sees the mixture of elements in the murals as reflective of synchronic eclecticism "in which the choices are limited to an extended present . . . The general implication is that synchronic choices among available expressions are syncretic in character, bringing into focus a message of unified strength in the coordination of peoples and beliefs" (1980: 172).

Donald Robertson suggests that the murals were painted by Maya artists brought to Cacaxtla by its rulers who "were . . . eager to take advantage of the superior artists who lived south and east of them" (1985: 301). According to Robertson, the Maya artists painted in their native style, put in Highland Mexican glyphs in accord with their patrons' wishes, and omitted elements such as Maya hieroglyphs which would have been of no interest to their patrons (Robertson 1985: 301). Jacinto Quirarte, in his study of composition, style, and costume details, suggests that the Structure A paintings were set in the Underworld and depicted "recently deceased (in battle?) and therefore deified figures in the Underworld" (1983: 214). His analysis of the Structure B scenes leads him to conclude that Maya polychrome vases and possibly Maya vase painters may have served as the transmitters and sources for the images (1983: 219).

Donald McVicker (1985) proposes that Teotihuacan elite may have gone to the Gulf Coast following the destruction of their city and may have participated in a strongly Mayanized, "international style" culture in the Veracruz-Tabasco region closely associated with the Olmeca-Xicalanca. McVicker hypothesizes that the Mayanized Olmeca-Xicalanca accompanied by the Mayanized Teotihuacanos brought an eclectic style to Cacaxtla and these two groups of people are depicted in the murals. McVicker further suggests that "it may be as appropriate at this time to speak of the epigonal Mayanized Mexicans as it is to speak of the epiclassic Mexicanized Maya" (1985: 99).

Credited with the discovery of Structure B's murals in May 1976, Diana López de Molina and Daniel Molina have focused primarily on the archaeology of Cacaxtla. According to López de Molina (1980), Late Classic ceramics at Cacaxtla are of a local type common to southwestern Tlaxcala which has characteristics similar to those of late Teotihuacan but modified; in addition, a ceramic type that resembles Mazapan is found in all levels at Cacaxtla. Ceramics from Oaxaca, Tehuacan, and the Gulf Coast are also present. The majority of the trade ceramic fragments are from the Gulf Coast regions of Tajin or the Tuxtla. Gulf Coast Fine Paste A, B, and C ceramics are also present at Cacaxtla suggesting that strong trade or commercial ties existed between Cacaxtla and the Gulf Coast; Cholula may well have been the area's distribution point (López de Molina 1980: 295-305).

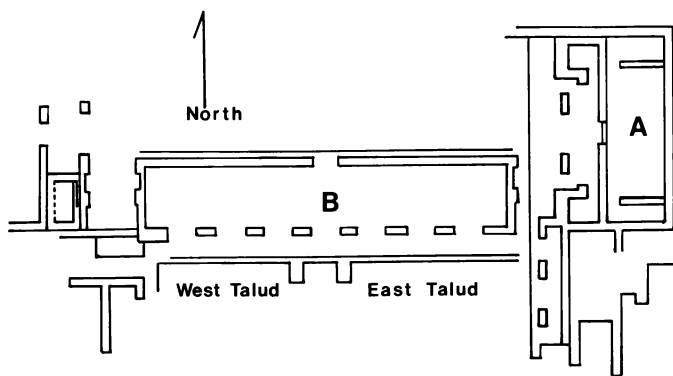
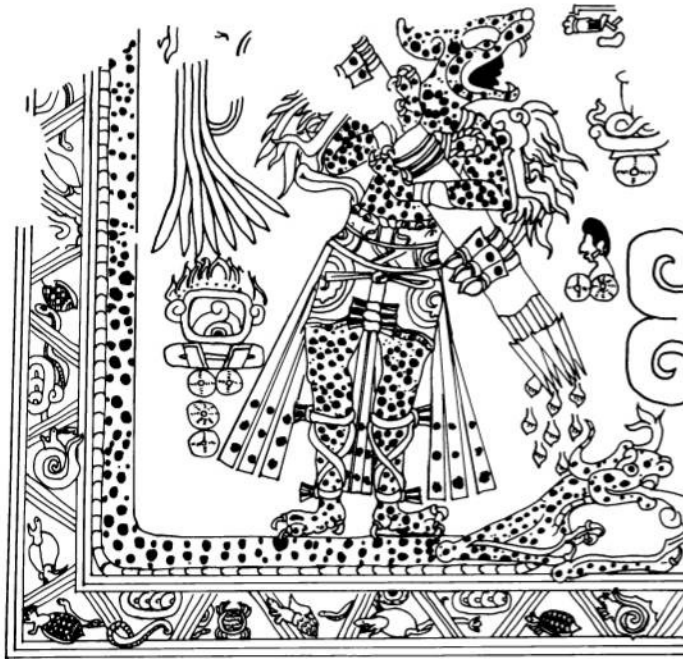


Fig. 1 Cacaxtla. Plan of Structures A and B (redrawn after Foncerrada 1982: fig. 1).

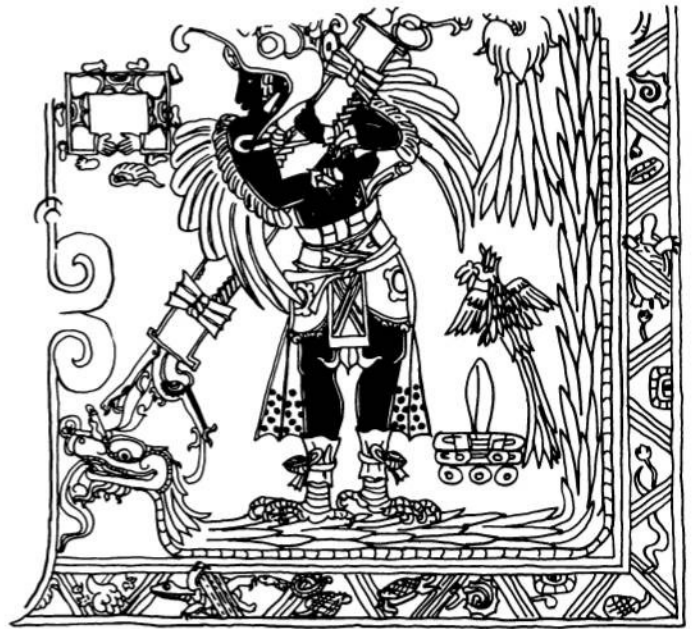
THE MURALS

Structure A

The murals at Cacaxtla are found in two structures within the same complex: Structures A and B (Fig. 1). On the walls flanking the entrance to Structure A, two large figures are painted. The north figure (Fig. 2a) is clothed in jaguar skin, has criss-crossed wrapped leggings, and black body paint. He carries a bundle of spears and stands on top of a jaguar-serpent. A companion figure (Fig. 2b) is painted on the north door jamb; he is also dressed in jaguar skin and wrapped leggings but does not have painted black skin. He pours water from a vessel deco-



a



a



b



b

Fig. 2 Cacaxtla. Structure A: (a) north mural—Jaguar man; (b) north jamb mural—Jaguar man with rain god vessel.

Fig. 3 Cacaxtla. Structure A: (a) south mural—Bird man; (b) south jamb mural—man with large shell.

rated with the image of the rain deity and holds a volute and flower (probably a water lily) ornamented serpent in the other hand. The south figure (Fig. 3a) is clothed in feathers, wears a bird headdress and bird feet, holds a long bar with a saurian head, and stands on a feathered serpent. His companion figure (Fig. 3b) on the south door jamb has black body paint, is depicted in a “dancing”

pose, and carries a shell from which a pale-skinned, red-headed figure emerges. All four figures are accompanied by glyphs and have borders in which water and sea creatures are depicted. The use of water motifs as a basal image has Maya parallels which date to ca. A.D. 692 at Palenque and Dzibilchaltun and between A.D. 650 and 750 at Altun Ha, Oxkintok, and Xpuhil (Coggins 1983: 48–

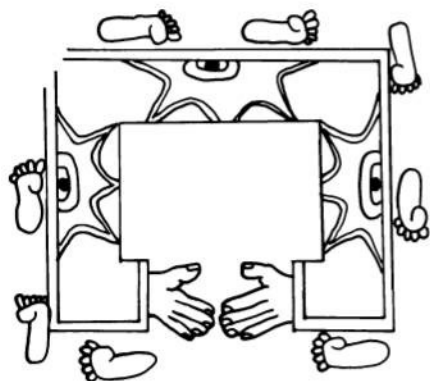


Fig. 4 Cacaxtla. Structure A, south mural, detail of star-enclosure glyph beside Bird man.

49). This may suggest a comparable date for the Cacaxtla murals, although the water frieze there is in a Teotihuacan-derived style. Among the glyphs alongside the bird figure is one in which a blue band with eyed, white half stars forms a rectangular enclosure with blue hands across the entrance (Fig. 4). A red background is used behind the two major figures; a blue background is behind both jamb figures.

Structure B

The murals painted on the *talud* of Structure B depict a very gruesome scene of bloody conflict. Some of the victorious warriors have costume elements similar to those of the north figures of Structure A: jaguar costume elements, rain god imagery, black body paint (Fig. 5; Vol. Figs. 1–2). Many of the defeated warriors have costume elements similar to those of the south figure in Structure A, especially the bird headdress and bird feathers (Fig. 5). The scene is divided into east and west halves by the staircase of the structure. Two pairs of the warriors stand apart from their compatriots in their poses and the greater elaboration of their clothing (Figs. 6, 7).



Fig. 5. Cacaxtla. Structure B, west *talud*, detail of scene.



Fig. 6 Cacaxtla. Structure B, west *talud*—3 Deer Antler and Bird warrior.

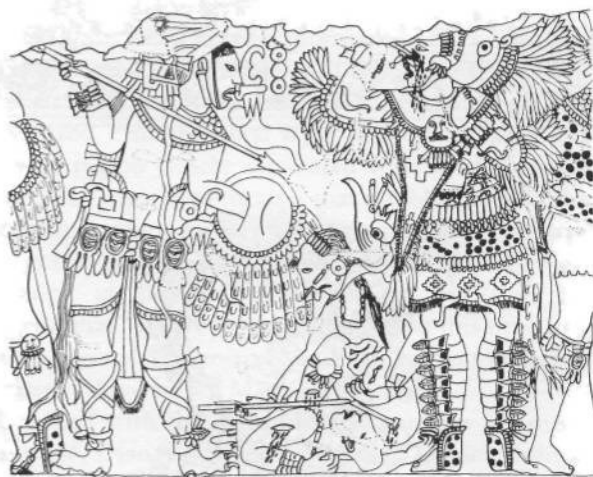


Fig. 7 Cacaxtla. Structure B, east *talud*—3 Deer Antler and Bird warrior.

On the east and west *taluds*, the two pairs of figures stand with feet splayed, torsos frontal, and heads profile. In each case the figures confront each other; one is a victorious warrior and the other is associated with the defeated warriors. The clothing of all four is very elaborate. Donald Robertson (1985) called attention to the pose of the defeated warriors which he termed “stela-like” because of its similarity to the formal, often static poses of Maya rulers on stelae. The pose of the victors is also stela-like although slightly more animated. The defeated warrior on the west *talud* is set apart from all other figures by the use of a stela-like white background with eyed, red half stars along its outer edge (Fig. 6). The context in which this element is found at Teotihuacan and its relevance to the use of the motif at Cacaxtla will be examined.

STAR MOTIF AT TEOTIHUACAN

The star-shaped motif occurs with great frequency at Teotihuacan (Figs. 8–18). Kubler refers to it as a starfish when it is whole and a sectioned conch shell when it is halved (1967: 6, 9, figs. 44, 45). The star-shape has five points whether it is whole or halved; in both there is a circle in the middle. I find it difficult to determine its identity



Fig. 8 Teotihuacan incense burner, Tetitla Offering 16. Museo Nacional de Antropología, Mexico (photograph courtesy of Janet Catherine Berlo).

Fig. 11 Teotihuacan ceramic fragment (redrawn after Séjourné 1984: fig. 151).



Fig. 12 Teotihuacan. Zone 5-A mural, detail, aquatic motifs (after A. Miller 1973: fig. 128).

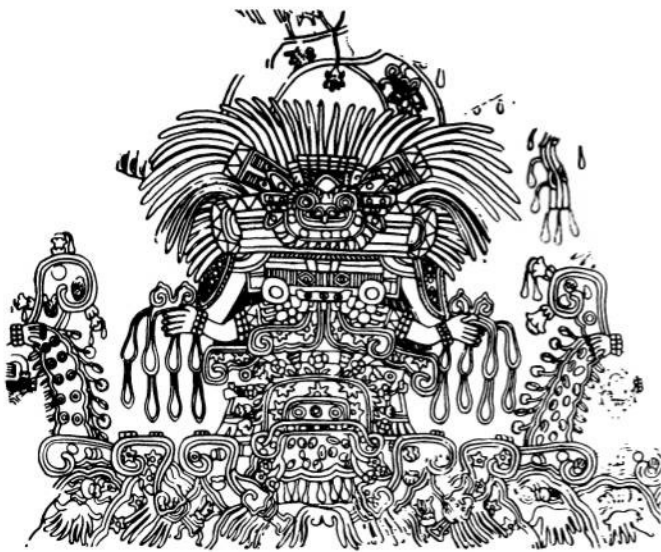


Fig. 9 Teotihuacan. Tepantitla mural, frontal female figure (after Kubler 1967: fig. 5).



Fig. 13 Teotihuacan. Patio of the Jaguars mural, plumed jaguar blowing on conch shell (after Kubler 1967: fig. 16).

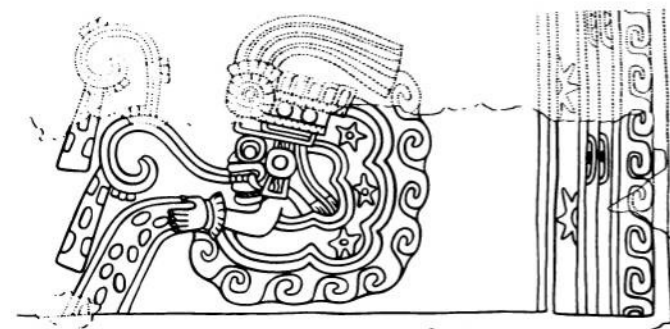


Fig. 10 Teotihuacan. Zacuala Palace mural. Tlaloc (after A. Miller 1973: fig. 203).

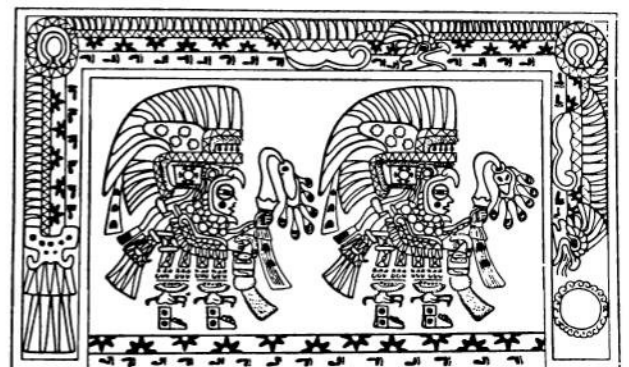


Fig. 14 Teotihuacan. Zone 5-A mural, men dressed as birds (after Kubler 1967: fig. 12, after Séjourné).



Fig. 15 Teotihuacan. Palace of the Jaguars mural (after A. Miller 1973: fig. 47).



Fig. 18 Teotihuacan plano-relief decorated ceramic vessel (after von Winning 1949: 137, fig. 10).

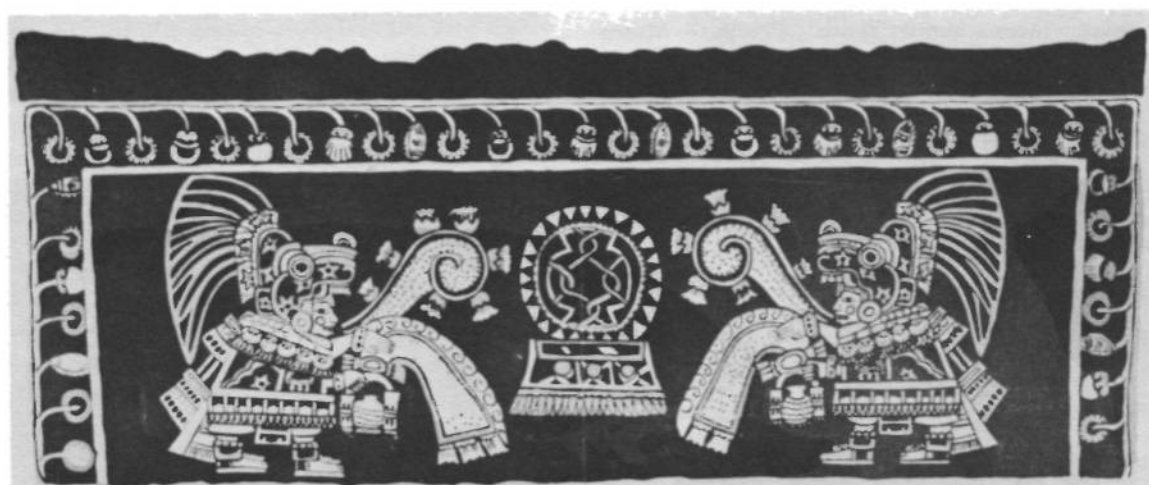


Fig. 16 Teotihuacan. Teopancaxco, Casa de los Barrios mural, two celebrants flanking cult emblem (after Villagra 1971: 138, fig. 6).



Fig. 17 Teotihuacan tripod ceramic vessel (redrawn after Séjourné 1984: 150, fig. 33).

with complete confidence. Sectioned conch shells (real or painted) characteristically have a hook or spiral motif in the center. The star-shapes at Teotihuacan typically have a circle or an eye in the center. The Cacaxtla star-shape has only the eye.

At Teotihuacan the star-shape is commonly depicted in mural paintings and on ceramics. When the context is a naturalistic one (i.e., other shells and aquatic creatures are depicted), the composition is often informal and the objects are scattered across the surface (Fig. 8). When the star is used ideographically to denote the context (i.e., water is alluded to), a formal composition tends to be used (Figs. 9, 10). The star is usually placed within a band shape and repeated. Whole and half stars are occasionally used in the same scene, and seemingly no distinction is made in their use; they appear to be two different ways of representing the same thing. The star may be either whole or half, but the two are not mixed within the same band. The formal use (but not the meaning) of the star-shape appears to be comparable to the eye which also appears in bands alluding to streams of water (Fig. 10). The eye is thought to function as an adjective defining the water as bright and spar-

bling (Kubler 1967: 9; von Winning 1947; Rands 1955; Pasztory 1976: 144).

Occasionally a stream of water comes from the center of the star-shape (Fig. 11); in one mural an aquatic being extends its head, arms, and legs from a star suggesting that it is indeed a shell (Fig. 12). The rain deity and jaguars are often depicted with star-shapes. In the Palace of the Jaguars, whole star-shapes form part of the border and rain god-like faces appear in the center of each star (Fig. 13). A shell-studded jaguar blows on a conch shell within the frame. In Zone 5-A a net-jaguar is depicted on top of a star border.

The star-shape is also used at Teotihuacan in a militaristic-sacrificial context (von Winning 1949: 136–139). These scenes seem to be later than some of the aquatic scenes, at least in mural painting, according to Clara Millon's chronology of Teotihuacan mural painting (C. Millon 1972), perhaps no earlier than the middle of the Xolalpan phase, or about A.D. 550 (C. Millon 1978: 300; R. Millon 1976: 240). Although the star is used in aquatic contexts prior to its use in militaristic contexts, the aquatic significance does not disappear after the militaristic context is introduced.

In late Teotihuacan art, the star-shapes frequently accompany figures clothed as warriors or carrying weapons; heart sacrifice may be implied in some scenes. The star is used with bird, jaguar, and rain god elements. In a mural from Zone 5-A, star borders frame two figures dressed in bird costumes who hold curved knives on which hearts are impaled (Fig. 14). Here the bird men are the sacrificers. In the Palace of the Jaguars, whole and half star borders are used both in a circular pattern and as crossed bands (Fig. 15). A skull is at the center of the crossed bands. Here there is a combination of aquatic motifs (the shells) and death-related imagery (the skull) along with the star-shape. At Teopancaxco the star-shape decorates the jaguar-bird headdresses of two figures flanking a disk with the net emblem (Fig. 16). In this context the significance of the star-shape is not clear. However, the net emblem is associated with the jaguar, water, fertility (von Winning 1968), the Underworld, and perhaps the night sun (Pasztory n.d.: 3; 1976: 245–246).

On Teotihuacan ceramics the star-shape's association with death and warfare is often quite explicit. On one

vessel, a warrior's shield is covered with star-shapes and skulls (Fig. 17). On another the star-shape is behind a man holding a skull and approaching a seated jaguar who (according to von Winning 1949: 138) has another star in his headdress (Fig. 18). At Teotihuacan the star is first associated with aquatic and terrestrial imagery and later is also depicted along with warriors, sacrificial scenes, skulls, jaguars, the rain deity, bird warriors, bird-jaguar figures, and the net emblem.

STAR MOTIF IN MAYA ART

The Teotihuacan star and half star are occasionally found in Maya art. The earliest example of which I am aware is found on a Teotihuacan-style stuccoed and painted tripod cylinder vessel from Burial 48 at Tikal (Fig. 19). The lid of the vessel has three motifs which Coggins relates to Teotihuacan butterfly symbolism with its attendant funerary significance (1979: 267). The wall of the vessel has four six-pointed stars that alternate with "three frontal skulls surrounded by red and green feather borders, painted in Mexican feather convention. From the mouths fall red multi-lobed forms that signify liquid, and probably blood in this case. Skulls are alien to the Maya at this time and even at Teotihuacan such representations are rare . . . Rare as skulls are the Early Classic iconography of Peten, one also appears as a prominent element in the headdress of Stormy Sky on Stela 31" (Coggins 1979: 267). Burial 48 is dated to A.D. 456 by a painted inscription on the wall of the tomb and by its association with Stormy Sky. Emphatic Central Mexican connections are expressed not only in the tomb furniture but also on Stormy Sky's principal monument, Stela 31. He is depicted on this stela flanked by two warriors dressed as Teotihuacanos; they wear Teotihuacan-style headdresses and carry *atlats* (a characteristic Central Mexican weapon) and rectangular shields.

Much later, the star appears again at Tikal as an eyed half star with five blunted points on the flaring cornice and *talud* of Structure 5D-43 (Fig. 20), "the so-called Teotihuacan-style building erected at Tikal during the seventh century" (Pasztory 1978: 109). As Pasztory points out, the combination of flaring cornice, *tablero*, and *talud* are common charac-

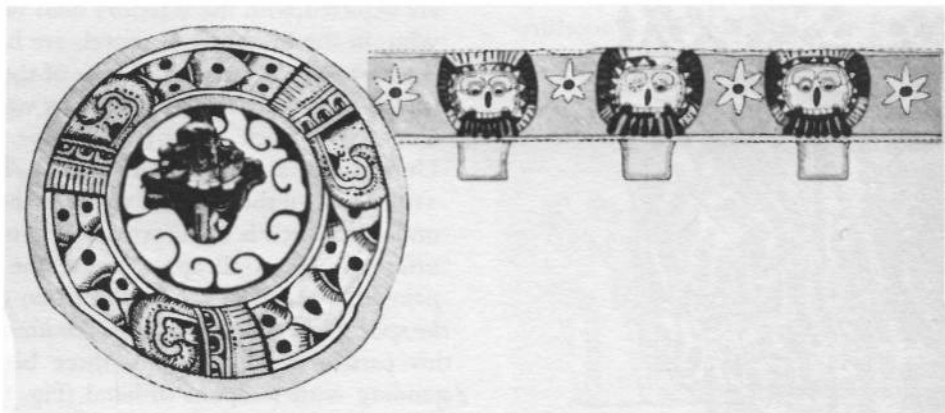


Fig. 19 Tikal. Burial 48, stuccoed and painted cylindrical tripod vessel (after Coggins 1979b: 264, fig. 6b, c).

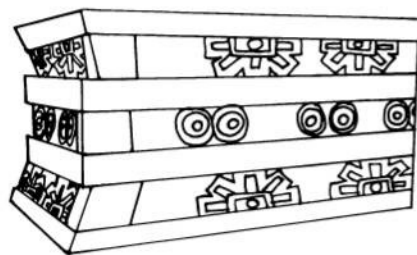


Fig. 20 Tikal. East Plaza Structure 5D-43 (redrawn after Pasztory 1978: 109, fig. 1).

teristics of Gulf Coast architecture (Pasztory 1978: 109). In the *tablero* of the building, paired disks are regularly spaced. The disks are reminiscent of the goggles of the Central Mexican rain deity; similar disklike shapes are also found on serpents' bodies in Maya art (the serpent on Lintel 3, Temple IV, Tikal is an example; Morley, Brainerd, and Sharer 1983: 286, fig. 11.15).

A five-pointed half star also occurs on Stela 1 (Fig. 21) from Lacanha, near Bonampak. The star appears on the side of a rectangular shield held by a warrior who wears a distinctive helmet thought to be associated with Teotihuacan and worn by some Maya warriors (e.g., Piedras Negras; see Stone, this volume). The warrior depicted on the rectangular shield wears a Mexican year sign in his headdress and holds aloft a circular shield bearing a Teotihuacan-style trilobe emblem representing water or blood. This stela, dated to A.D. 593, has archaic costume features according

to Proskouriakoff. She further notes that beaded plumes make their first appearance on this stela: "Curiously enough this type of beaded plume, with two small diverging tips, which is also common at Piedras Negras, goes out of style in the Usumacinta area before the last quarter of Cycle 9 but reappears again in the Toltec period at Chichen Itza" (Proskouriakoff 1950: 117-118).

In Northern Yucatan, the Palace of the Stuccoes at Acanceh has stucco relief friezes on its facade which include Teotihuacan elements (V. Miller n.d.: 3). The building is thought to have been built during the seventh century A.D., perhaps close to the end of the century (Andrews IV and Andrews V 1980: 146). At Acanceh, the half star appears on the body of a serpent. V. Miller suggests that "the Acanceh frieze may refer to sacrifice, death, and the Maya underworld" (n.d.: 4).

Undoubtedly other instances exist in which the Teotihuacan star or half star was used by the Maya, but it is clear that these motifs were used infrequently. Although there are too few examples on which to base firm conclusions about the significance of the Teotihuacan star or half star in the Maya area, the contexts in which the motifs are found are very similar to their Teotihuacan contexts, particularly those that relate to warfare or death. The clearest indication of this relationship is given on Lacanha Stela 1 (Fig. 21); the warrior on the stela not only wears a Teotihuacan-style headdress, but his shield has Teotihuacan-derived elements or characteristics: rectangular shape, five-pointed half star, Mexican year sign in headdress, and trilobe glyph.

STAR MOTIF AT CACAXTLA

At Cacaxtla the half star has very limited use. Its meaning is not at all readily apparent, and it could easily be dismissed as merely decorative. Yet taken in context with the events of the Structure B murals and taking into account its use at Teotihuacan in a militaristic/sacrificial context, the significance of the half star at Cacaxtla parallels its use in late Teotihuacan mural painting and ceramics. There seems to be symbolic continuity; the half star implies death and sacrifice. Other elements in the Cacaxtla scene support this hypothesis and further enhance the half star's significance.

In both Structure A and Structure B murals, star bands are depicted with the warriors who wear bird helmets and who, in the Structure B mural, are being defeated by the jaguar-rain god warriors. Three of the figures from Structure A and many of the victorious warriors in the conflict scene have black body paint, often associated with the Underworld and with warriors (M. E. Miller 1986: 109-110). Some of the defeated warriors' bodies have blue paint on them which is often associated with ritual sacrifice and offerings. From all appearances, the bird warriors were painted blue before the battle, taken captive, and slain on the spot, if the mural is to be taken literally as an account of this particular battle. Only three bird warriors remain standing with weapons in hand (Fig. 22); only one other bird warrior retains his shield (Fig. 5). The use of the star border with one of the standing, frontal figures (Fig. 6) is consistent with other indications of his imminent sacrifice:



Fig. 21 Lacanha. Stela 1 (rubbing by Merle Greene Robertson, after Greene, Rands, Graham 1972: 165, pl. 76).

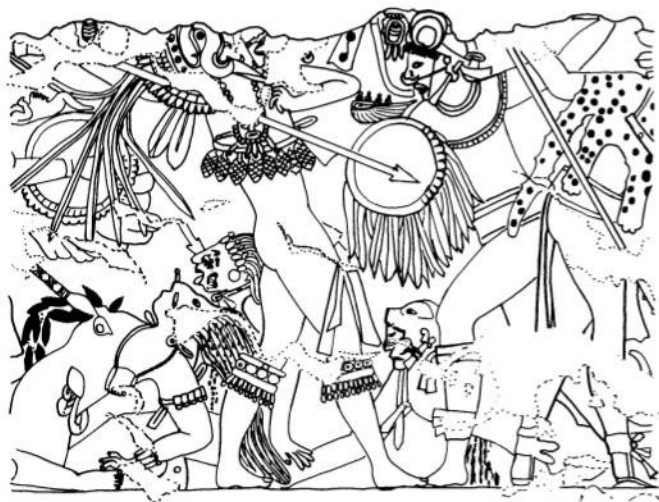


Fig. 22 Cacaxtla. Structure B, west *talud*, standing bird warrior engaged in battle.



Fig. 23 Tonina. Monument 70 (after Baudez and Mathews 1979: 32, fig. 3).



Fig. 24 Tikal. Burial 116, bound captive incised on bone (after W. Coe 1967: 124).

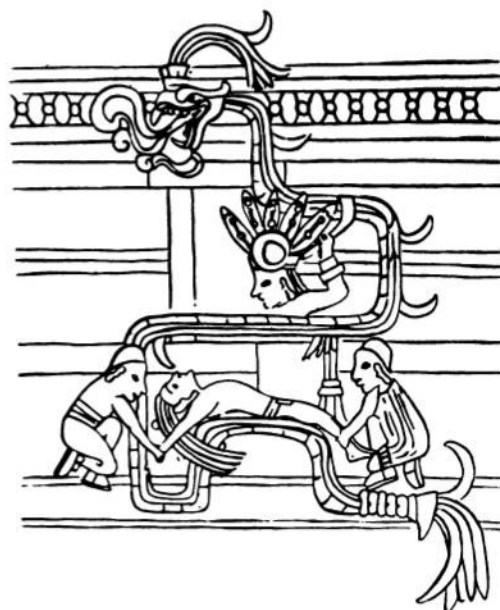


Fig. 25 Chichen Itza. Temple of the Warriors mural (after Tozzer 1957: fig. 395).

his wrists crossed on his chest (a gesture of capture, submission, and sacrifice [e.g., Tonina, Fig. 23; Baudez and Mathews 1979: 33]), his long, jeweled hair (Fig. 7) (e.g., Tikal sacrificial victim, Fig. 24, and sacrificial victim from the Temple of the Warriors, Chichen Itza, Fig. 25), and the spear across his abdomen. On the east *talud* (Fig. 7), the bird leader is shown with a dart in his cheek and may be pressing it into his flesh in an act of self-sacrifice. In Landa's description of Maya bloodletting practices, he mentions that the Maya pierced their cheeks in self-sacrifice (Tozzer 1966: 113–114). With few exceptions, the bird leader's compatriots are mutilated, dying, or dead. Although some have chest wounds and one appears about to undergo heart sacrifice, many have been slashed in the abdomen and their intestines spill out (Fig. 7). Ritual torture of victims clearly was a part of Maya sacrificial rites, as is evident from the Bonampak murals and numerous Maya vase paintings (Fig. 26; Schele and Miller 1986: 217; Schele 1984: 9–11). The spear across the bird warrior's abdomen seems to imply that he too is to be tortured or killed (Fig. 6).

Although Donald McVicker has referred to the star-border as a "star-cloak" (1985: 86–87), I think that Donald



Fig. 26 Maya ceramic scene of ritual disembowelment (after Schele 1984: 11, fig. 4a).



Fig. 27 Cholula. Stela with border of interlaced scrollwork.

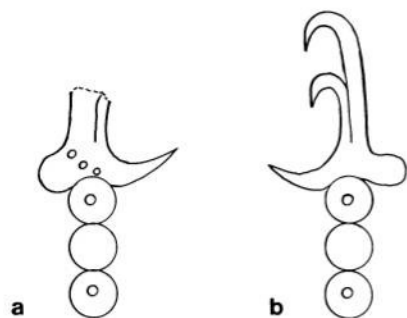


Fig. 28 Cacaxtla. Structure B: (a) east *talud*, 3 Deer Antler name glyph; (b) west *talud*, 3 Deer Antler name glyph.

Robertson may have come closer to identifying the object in his reference to the stela-like pose of this figure (1985). In all probability, the stars outline a stela or stela-like monument. The figure to the viewer's left rests his head against the object, which would only be possible if it were of some rigid material such as stone or wood. In the west plaza at nearby Cholula, a comparable stela is also plain in the center with engraved Tajin style scrolls bordering its outer edges (Fig. 27) much as the half stars border the object at Cacaxtla. Insight into the possible use of such stelae with ornamented borders is provided in the Cacaxtla mural.

Three Deer Antler

The bird warrior's attacker is of such importance that he is named and depicted on both the west and east *taluds* (Figs. 6, 7, 28). His name is given as Three Deer Antler (Baddeley 1983: 62), and his costume contains identifying

elements: Mexican year sign in headdress, rain deity mask or glyph in front of his face, criss-crossed wrapped leggings, and black body paint. On the east *talud* he wears a rain deity mask on his heavy belt as well and wears jaguar feet boots; he uses an *atlatl* and dart (Fig. 7). On the west *talud* he holds a long spear; the blade is bound to the shaft in a distinctive, decorative manner (Fig. 6). On west and east *taluds*, one of his comrades wears a jaguar-skin jerkin. The depiction of the rain deity with year sign is thought to derive from Teotihuacan art; it is found with great frequency outside of Teotihuacan in the seventh to eighth centuries and among the Maya "is most frequent between 711 and 755 A.D." (Pasztor n.d.: 7). It is most commonly associated with the image of the ruler as warrior (Pasztor n.d.: 3-4; Stone, this volume).³

MAYA "STAR-OVER-EARTH/SHELL/PLACE NAME" ("STAR-OVER-X") GLYPH

Aguateca Stela 2 and Dos Pilas Stela 16 (Figs. 29a, b) both depict a similar complex of costume elements; the events referred to in the glyphic text also seem to be similar to the events depicted in the Cacaxtla battle mural. Both stelae carry dates of 9.15.4.6.4., 8 Kan 17 Muan (A.D. 735); the rulers wear headdresses with the year sign, have a modified rain deity (Schele calls it pseudo-Tlaloc, 1984: 30, 33) mask in front of their faces, rain deity faces on their aprons, and jaguar boots on their feet.⁴ In addition, the Aguateca ruler has a jaguar-paw bag and carries a shield with the image of the underworld jaguar sun on it. The text on both stelae appears to record the same events: a star-over-shell (or star-over-Seibal) event, followed by an axe event, followed three to seven days later by a *na* event (Schele 1984: 27). Graham (1967) first identified "the military meaning which [star-over-shell, star-over-earth, or star-over-place name] glyphs . . . are now known to have had . . . The two monuments record the same events: a 'star' event . . . ; a decisive battle with capture of the local ruler on the next day; and a follow-up event six days later" (Lounsbury 1982: 152). Schele says that "the *na* [or follow-up] event appears to record the act of sacrifice both of captives and lords in self-inflicted blood-letting as acts to gain merit perhaps with the gods and certainly before the people. It also can record the acts of humiliation and shaming deliberately committed against captured lords and by lords on themselves as part of the blood-letting rite" (Schele 1984: 42-43). Schele (1984: 30-34) links the headdress worn by the Dos Pilas and Aguateca rulers to captive and auto-sacrifice iconography, usually in association with warrior iconography (see also Schele and Miller 1986: 213). The strong similarity in costume elements of the Dos Pilas, Aguateca, and Cacaxtla rulers suggests that the events portrayed at Cacaxtla are similar to the types of events referred to glyphically on the Dos Pilas and Aguateca stelae. Certainly they are similar in that a battle and sacri-

³Pasztor also cites Nicholas Hellmuth, *Mexican Symbols in the Classic Art of the Southern Maya Lowlands*. M.A. thesis, Brown University, 1969; see also Schele 1984: 33 and Berlo n.d.: 48-79.

⁴Both stelae apparently depict the same ruler whom Ian Graham calls "Fire-face-wing" (Graham 1967: 9-19).

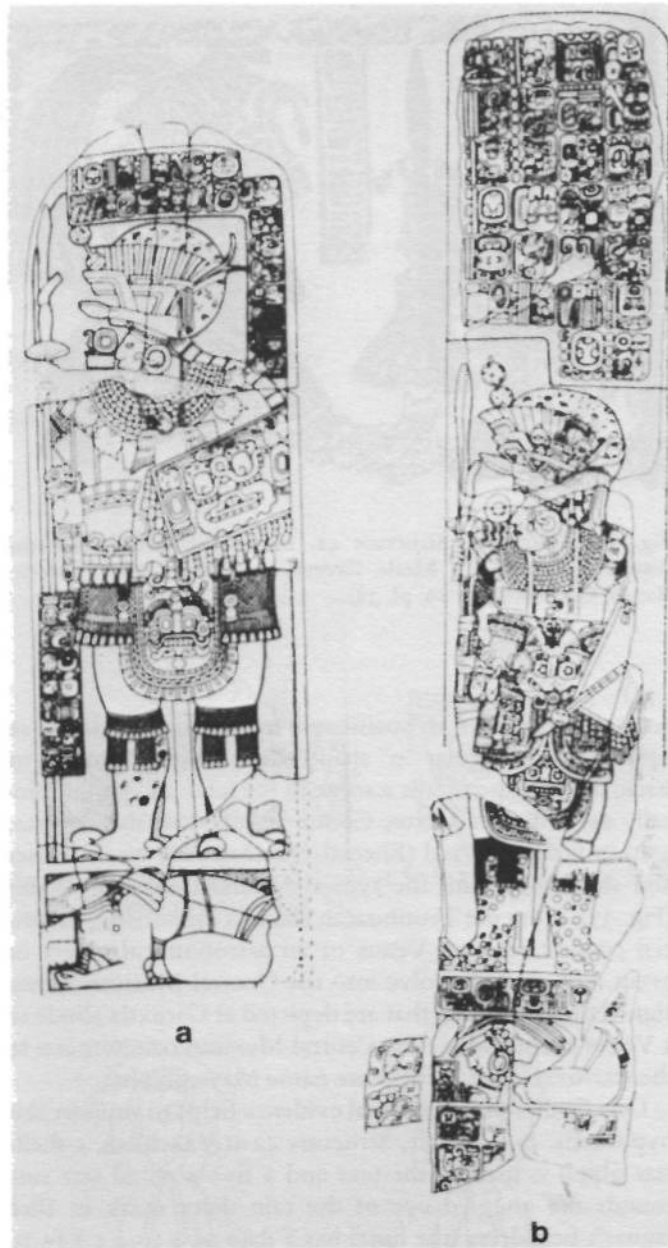


Fig. 29 (a) Aguateca. Stela 2 (drawing by Ian Graham); (b) Dos Pilas. Stela 16 (drawing of upper sections by Ian Graham, of lower section by Peter Mathews) (after Schele 1984: 26, figs. 15 a, b).

figures are portrayed at Cacaxtla. But is the reference to a star event depicted or alluded to?

The star-over-earth/shell/place name has been linked to periodic calendric intervals by Kelley (1977); Closs (1979) thinks that they are Venus glyphs. The star-over-x appears on several stelae and lintels; Closs has provided a list and drawings of the Maya earth-star and shell-star glyphs from the inscriptions (1979: fig. 2). Lounsbury (1982: 146–151, 166–167) and M. E. Miller (1986: 44–51; Schele and Miller 1986: 217) suggest that a Venus/star event determined the timing of the sequence of events portrayed in the Bonampak murals: a battle and sacrifice of captives to mark the ceremonies associated with the naming of the legitimate heir. Four cartouches in the northeast vault of Room 2 contain Venus/star glyphs on or near two peccaries, two

people, and a turtle (Lounsbury 1982: 167, fig. 3). Although Miller does not note the possible parallel between the half stars at Cacaxtla and the Venus/stars at Bonampak, she does note other parallels between the paintings at Bonampak and Cacaxtla; at both sites some of the victors wear jaguar pelts and some of the defeated wear bird elements in their headdresses and costumes (M. E. Miller 1968: 107–108). Does the Maya glyph star-over-x have an equivalent in the Teotihuacan star or its Cacaxtla derivative? What evidence is there that the Teotihuacan star-shape might have stellar connotations?

The evidence is slender but tantalizing. At Teotihuacan the use of the star in the wings of the descending bird-man in Zone 5-A suggests celestial associations (Fig. 30). The diving figure has been associated with stellar or solar significance (Pasztory 1977: 93). If the half star is, as Kubler suggests, a sectioned conch shell, it would have water and underworld associations and also would be associated with Quetzalcoatl in his aspect as Venus. Half stars are indeed depicted on the body of the Teotihuacan bird-serpent which frames the two bird men carrying impaled human hearts (Fig. 14). Feathered serpent heads appear on either side of a skull in the headdress of a figure from the Palace of the Jaguars (Fig. 15); shells and whole and half stars are painted around a central skull on a shieldlike form beneath the figure's head. At Teotihuacan the half star is associated with skulls with prominent teeth; in Maya texts a similar skull is an alternate glyph for Venus (Lounsbury 1982: 167, fig. 1d). A sculpted whole star from Teotenango has an eye at its center—a motif commonly used to indicate brightness (Fig. 31).⁵ All of the half stars in the Cacaxtla murals are eyed.

At the nearby site of Xochicalco the half star is used on several monuments, among them Stela 2 and the Piedra de Palacio (found in nearby Coatlan) (Figs. 32a, b). On the

⁵A Late Classic–Post Classic Central Mexican site, Teotenango was first occupied in A.D. 650–750 and has architecture and ceramics that are reminiscent of late Teotihuacan (Piña-Chan 1975: 130; Álvarez 1983: 235–236). In a study of Teotenango sculpture, Álvarez places the star in Period 3 (A.D. 900–1162) and points out that the Teotihuacan and Xochicalco influence present in Period 2 (A.D. 750–900) continues in the sculpture of Period 3 (1983: 254). The star sculpture was found in the upper part of the Structure of the Serpent. In Álvarez' opinion, "Esta escultura, sin duda alguna, representa al planeta Venus, con la figura del ojo estelar al centro, 'el ojo de Venus' " (1983: 247). Unfortunately, he does not present any other evidence in support of this identification.

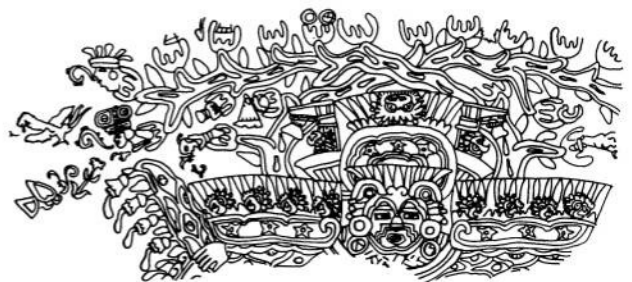


Fig. 30 Teotihuacan. Zone 5-4 mural, diving man-bird (redrawn after Gendrop 1971: 40, fig. 96 and A. Miller 1973: figs. 107–9).

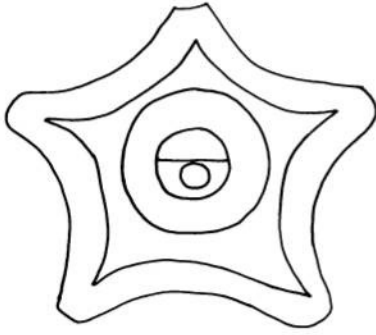


Fig. 31 Teotenango. Tenoned star-shaped stone redrawn after Piña Chan 1975: fig. 26).

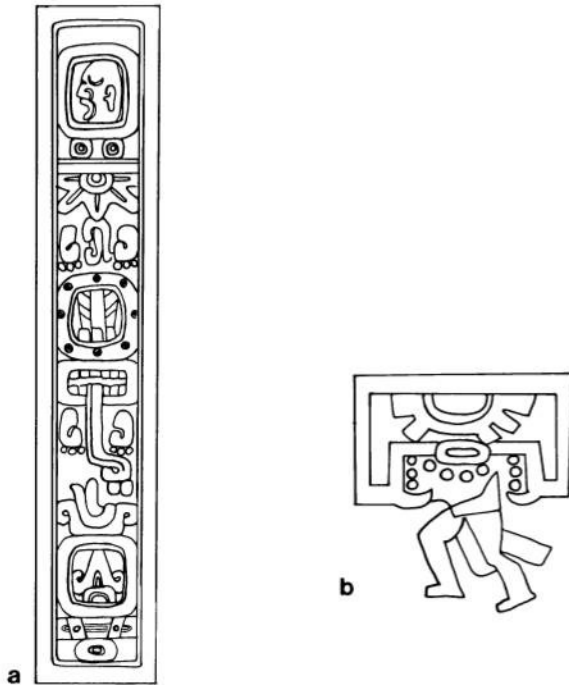


Fig. 32 (a) Xochicalco. Stela 2 (detail; redrawn after Marquina 1951: fig. 3); (b) Coatlan (near Xochicalco). Piedra del Palacio (detail; redrawn after Caso 1967: 166, fig. 1).

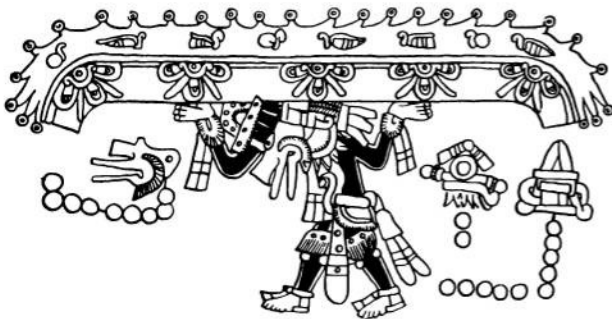


Fig. 33 Lord 9 Wind, Codex Vindobonensis obverse (47b) (after Selser 1904: 307, fig. 72b).

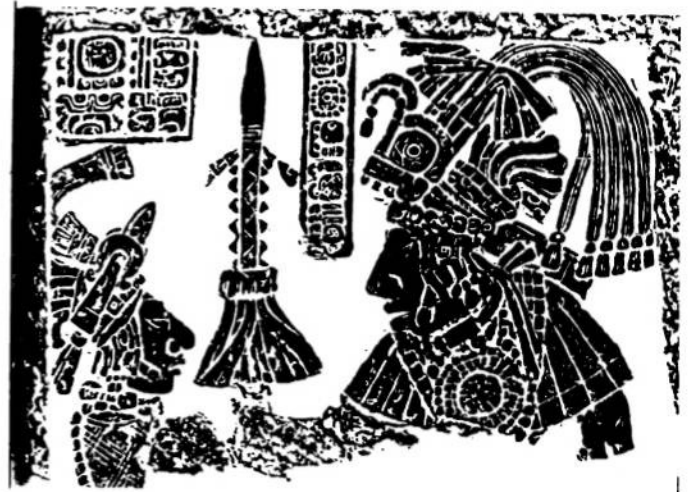


Fig. 34 Yaxchilan. Structure 42, Lintel 41, Bird Jaguar and consort (rubbing by Merle Greene Robertson, after Greene, Rands, Graham 1972: 89, pl. 38).

latter the half star is positioned on the underside of an upside-down, angular "u" shape which a figure bears on its back. This image recalls a scene in the later and geographically more distant Mixtec Codex Vindobonensis (obverse, 47b) in which 9 Wind (Ehecatl/Quetzalcoatl) carries water and sky bands with the typical Mexican sign for Venus (Fig. 33). Does the Teotihuacan star in a militaristic, sacrificial context refer to Venus or an astronomical object or event, and does it evolve into the Central Mexican Venus sign? I think the stars that are depicted at Cacaxtla allude to a Venus event and are the Central Mexican counterparts to the star-over-shell/earth/place name Maya glyphs.

One further piece of visual evidence helps to support this hypothesis. In Lintel 41, Structure 42 at Yaxchilan, a shell-star glyph is used in the text and a five-pointed star surrounds the goggled eye of the rain deity mask in Bird Jaguar's headdress (the lintel has a date of 9.16.4.1.1 [A.D. 755]) (Fig. 34). In addition, the blade of the spear held by Bird Jaguar is bound to the shaft in the same distinctive manner as the blade held by Three Deer Antler on the west *talud* of the Cacaxtla battle scene (Fig. 6). The use of the five-pointed star and rain deity mask on the main figure and the use of the shell-star glyph in the text suggests a certain parallelism of Cacaxtla and Maya iconography in Lintel 41.

RITUAL NATURE OF CACAXTLA SCENES

The narrative nature of the Structure B scene obscures the ritual, sacrificial content which the star glyph amplifies and clarifies. The ritual nature of the Cacaxtla scene is further confirmed by several other elements. A glyphlike motif on the shield of a victorious Tlaloc-jaguar warrior alludes to heart sacrifice (Fig. 35). The significance of this curious feathered bundle is made apparent on Piedras Negras Stelae 11 (9.15.0.0.0) and 14 (9.16.15.0.0) in which the bundle is placed in the chest cavity of heart sacrifice victims to represent the sacrificial heart (Fig. 36).

Fig. 35 Cacaxtla. Structure B, east *talud*, detail of heart bundle.

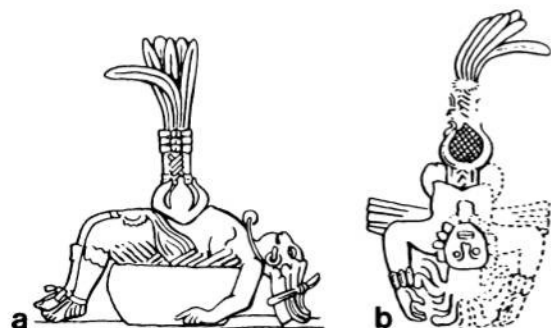


Fig. 36 Piedras Negras. (a) detail of Stela 11; (b) detail of Stela 14 (after Tozzer 1957: pl. 389a, b).

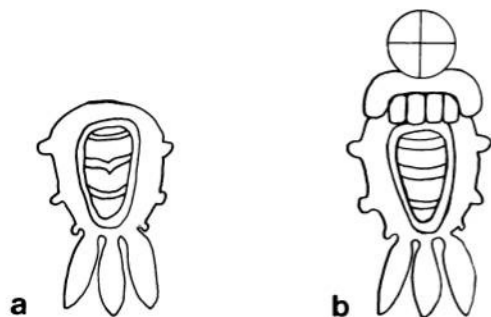


Fig. 37 Cacaxtla. (a) heart glyph; (b) compound heart glyph.

Among the numerous glyphs present in the Structure B painting, a Teotihuacan-derived heart glyph is used most extensively (Fig. 37a). The precise meaning of the glyph is difficult to determine, although it has been studied extensively. Foncerrada (1982) and Langley (1982) have analyzed it and identified it as a cross section of a heart. The heart is used alone and with three other elements: a quartered disk, gums, and teeth (Fig. 37b). Foncerrada refers to the quartered disk as meaning “turquoise or something precious” (1982: 29). Berlo (Chap. 2, this volume) suggests that this compound glyph is a locative naming the location of the scene: “place of the bloody hearts, place of sacrifice, place of bloodletting.” Comparing this glyphic complex to similar glyphs at nearby Xochicalco, Hirth (this volume) suggests that the glyphic

message is “‘I eat or consume something precious’ or ‘I put something precious inside’.”

The heart glyph is also used as a costume element on Three Deer Antler’s belt. Another heart glyph is placed over the open chest wound of a fallen bird warrior clearly alluding to his excised heart. Two other glyphs (now eroded and lost) were originally painted beside the compound heart glyph immediately above the shield with the heart bundle insignia (Fig. 35). The center glyph, the triple-knotted bow tie, is part of the insignia worn by the Maya perforator deity. According to Joralemon, the perforator deity is the personification of the bloodletting instrument used by the Maya in ritual, autosacrificial bloodletting ceremonies (Joralemon 1974: 59–67; Schele and Miller 1986: 176). Triple-knotted bow ties are also worn as wrist bands by Three Deer Antler as he confronts the bird warrior leader in both west and east *talud* paintings (Figs. 6, 7).

As is evident, blood abounds in the Structure B paintings. The literal shedding of blood is paralleled by the repeated glyphic representation of a heart. The Maya triple-knotted bow tie symbolically parallels the repeated glyphic heart representations and confirms the reading of the scene as being about ritual bloodletting and the preciousness of blood (implied by the compound heart glyph). The ritualistic significance of the scene is further enhanced by the presence of a woman (or a man in woman’s clothing) in the west *talud* painting (Fig. 38). Wearing a bird headdress, this person is much shorter than all the others and, most significantly, is clothed and wears a Maya woman’s robe. She does not directly engage in the battle but raises her right hand to her shoulder in a standard Maya gesture of submission (V. Miller 1983). In Maya art women are present primarily as the mothers and wives of rulers in scenes relating to accession or statements legiti-



Fig. 38 Cacaxtla. Structure B, west *talud*, woman.

mizing the ruler's right to rule (Schele and Miller 1986: 177–179). Men dressed as women appear in scenes associated with bloodletting and accession rites (M. E. Miller 1986: 147).

Just as blood is the dominant liquid in the Structure B murals, water predominates in the Structure A paintings. On the walls flanking the entrance to Structure A, the two large figures are depicted standing within water-band enclosures (Figs. 2a, 3a). Their companion jamb figures stand with feet inside the basal water bands (Figs. 2b, 3b). The jaguar-man's companion figure pours water from a Tlaloc vessel (Fig. 2b). Blue drops of water (not blood, as might be expected) fall from the bundle of spears held by the north, jaguar clad figure onto the head of the water lily jaguar-serpent on which he stands (Fig. 2a). The bundle of spears is bound with several sets of triple-knotted bow ties. The jaguar-man's arms appear at first to be feathered, but on closer examination the motif is the so-called "serpent wing" which Bardawil links to the Underworld (1976: 204–206), nobility and rulership (1976: 207, see also figs. 7, 8).

On the south wall of Structure A, the bird-man holds a long bar with a saurian head and flint tongue (Fig. 3a). The bar that he holds is, except for its unusually large size, similar to the ceremonial serpent bars that Maya rulers hold. The bird-man's ceremonial bar has two triple-knotted elements. The flint on the bar is similar to one depicted on a stela from Bonampak's environs which is also accompanied by three knotted strips and thought to be associated with ceremonial bloodletting (Joralemon 1974: 65, fig. 18). David Stuart considers two-headed serpent bars as belonging to a general category he terms "blood serpents" (Stuart 1984: 17). He further notes that "to 'display one's blood' is an actual description used by the Maya themselves to refer to such serpent bar scenes" (Stuart 1984: 17). The bird-man's companion figure wears the triple-knotted bow tie motif on his loincloth and carries a blue-green shell from which a human emerges rather than an aquatic creature as might be expected (Fig. 3b). The glyph Three Deer beside the main figure names him and links him to the jaguar warrior Three Deer Antler in the Structure B paintings, as Berlo (Chap. 2, this volume) suggests.

In Structure A the triple bow ties alluding to bloodletting are clearly evident, even though blood is not depicted. Even the background color of the murals may refer to blood or water. The two major figures stand before red backgrounds which may symbolically indicate blood; the triple bow ties link the figures to autosacrificial bloodletting and rulership. The two lesser jamb figures have watery blue backgrounds; one figure pours water and the other holds a seashell.

In contrast, the Structure B paintings focus on both literal and figurative references to blood and the ways in which it was obtained. The scene is of the ritual sacrifices that follow a battle. Blood glyphs, bleeding victims, the heart bundle on the shield, and the triple-knotted bow ties in glyphic form and as a costume element on Three Deer Antler all function to inform the viewer on several levels of the scene's significance. Parallels are visually drawn between war/blood/sacrifice in Structure B and underworld/

water/rulership in Structure A and the interrelationship of the two themes.

SUMMARY AND CONCLUSIONS

A study of the life and times of a seemingly decorative motif such as the star-shape has the potential to reveal quite a bit of information. The half star was chosen because it is virtually ubiquitous at an important site (Teotihuacan), is used at other sites as part of a complex of elements from the donor site, is used over a long period of time, and can be shown to have meaning (in context) in addition to its decorative qualities.

At Teotihuacan the half star (and the whole, five-pointed star) has aquatic and terrestrial associations in its initial use. Later, in approximately the middle of the Xolalpan phase (ca. A.D. 550), the star gradually begins to acquire death, war, and sacrificial associations. The star retains its watery associations as well, but these diminish in frequency and are sometimes tinged with death or warrior imagery. Disjunction occurs in that the appearance of the star does not change significantly over time but its meaning, in context, does.

Among the Maya the star-over-x glyph is first used in 9.9.18.16.3 (A.D. 631; Stela 3, Caracol, Belize) and continues to be used after the Teotihuacan half star ceases to appear in Maya art. As I have suggested above, the Maya glyph and the Teotihuacan motif seem to have similar meaning but obviously do not look alike. I think that disjunction has occurred. As the meaning of the star was absorbed into Maya ideology, the Teotihuacan motif was transformed into the star-over-x glyph with similar although more precisely defined meaning and a totally different, definitely more Mayan appearance. At Teotihuacan the motif continues unchanged even as its meaning changes; in Maya art, the essential meaning continues even as the motif is transformed.

At Cacaxtla the star is painted in two places. It is part of a glyph painted in Structure A beside a bird-person and borders a painted stela in Structure B where it plays a somewhat inconspicuous role amid the carnage of the scene. The meaning of the Teotihuacan-style star in the glyph on Structure A at Cacaxtla is not evident (Fig. 4), but the placement of the glyph does suggest a close relation with the elite person standing on the feathered serpent. The footprints around the glyph indicate that it is a place or structure that one could walk around and possibly enter (although there are no footprints inside the enclosure). The use of the water band around the scene as a whole suggests that the general location may be the Underworld (cf. Coggins' [1983: 26–27] discussion of the use of the stucco water band at Dzibilchaltun). If the star does represent Venus, the glyph may refer to Venus' passage through the Underworld (in inferior conjunction). The connection between the feathered serpent and Venus is well established for the Post Classic and may hold true for the Late Classic as well. The Central Mexican Post-Classic deity Quetzalcoatl (Feathered Serpent) was mythically transformed into the planet Venus as Morning Star according to legend. Venus as Morning Star was closely

associated with warfare. The Cacaxtla glyph with half stars may be a name for Enclosed Place of the Star or Venus, perhaps a battlefield, a walled place, or even a pyramid associated with Venus, warriors, and the feathered serpent. Two such structures that readily come to mind are the Ciudadela (Teotihuacan) and the Pyramid of the Plumed Serpent (Xochicalco).

In the east *talud* mural of Structure B, the figure standing in front of the stela appears to be in imminent mortal danger while all around him his companions lie dead or dying. Although the star is clearly used in a war-related scene, its own significance is far from apparent. Stars are often present in Teotihuacan depictions of warriors or scenes in which sacrifice is implied. The context in which the star at Cacaxtla is used suggests continuity of meaning between Teotihuacan and Cacaxtla. Since, of the two groups of Cacaxtla warriors, the victorious jaguar-rain god warriors are associated with and wear more Teotihuacan-derived elements, one might reasonably assume that the star-banded stela is theirs. Their Mayoid characteristics and costume elements would suggest the possibility of their having adopted other Maya elements, such as stelae, which are not found at Teotihuacan. The preponderance of locally made, Teotihuacan-derived ceramic types at Cacaxtla further reinforces the Teotihuacan association of the victors. The quantity of Gulf Coast ceramics found at Cacaxtla indicates, at the very least, a commercial relationship with that region. McVicker's thesis (1985) is that the victors are of Gulf Coast origin and are probably Olmeca-Xicalanca. As Santley points out (this volume), during the Classic period Teotihuacan influence was very pervasive on the South Gulf Coast and conversely "most of the foreign pottery present at Teotihuacan itself came from the Gulf Coast, implying strong mutual or dual-directional commercial relationships between the two regions" (Santley, this volume). As such, there surely would have been interaction between the Teotihuacanos or Teotihuacan influenced Gulf Coast people and the nearby Chontal Maya (also known as the Putun and Itza; Ball, this volume) as well as the somewhat enigmatic Olmeca-Xicalanca, if in fact they were ethnically diverse peoples.⁶

The Teotihuacan half star is found in at least one Gulf Coast site. At Maltrata, in the state of Veracruz, a boulder was found which has several low relief sculptures on it. On one side a warrior stands before a kneeling woman who wears a Mexican year sign in her headdress. On the other side of the boulder, a feathered serpent arcs its body above and to the side of a temple (Fig. 39). An eyed half star is attached to the underside of the serpent's body and the glyph 4 Movement is depicted immediately below the star (Medellín Zenil 1962: figs. 14, 15). Medellín Zenil (1962: 559) places the carvings in the Late Classic (1962: 560).

A resurgence of Teotihuacan-connected regalia (primarily warrior-related) appears quite frequently in the Usuma-

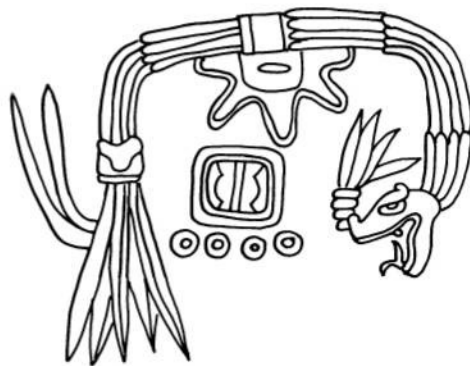


Fig. 39 Maltrata, Veracruz. Feathered serpent with pendant star (redrawn after Medellín Zenil 1962: fig. 14).

cinta and Peten (Tikal) area in middle to late sculpture of cycle 9 (Schele and Miller 1986: 213). Rulers A, B, and C at Tikal proclaim their Teotihuacan ancestry, and rulers of Yaxchilan, Piedras Negras, and related sites dress as the Maya version of a Teotihuacan warrior-ruler. The large number of figures on Maya stelae who wear the Mexican year sign further attest to this time as a period of revival of Teotihuacanisms. I think that McVicker is correct in identifying the victors as people with Gulf Coast origins who have syncretized Teotihuacan and Maya elements in their art and culture (McVicker 1985: 98). It is in the Gulf Coast between central Veracruz and western Campeche that Teotihuacan and Maya traits are found intermingled (Santley, this volume; M. Coe 1965: 705) as they also are in the accoutrements and clothing of the Cacaxtla victors. However, the defeated people are in physiognomy, clothing, and accoutrements so thoroughly Maya as to be Maya. The most likely place for such a battle and its denouement to have taken place is in the southern Veracruz or Campeche region where the two groups bordered each other. Based on the costume of the defeated warriors, the battle may even have taken place in the Usumacinta or Pasion region. Perhaps the battle or more particularly the sacrifices that followed were viewed as especially critical to the political and economic success of the victors and central to their claim of legitimate rulership. In the murals of Structure A, I think the victors are proclaiming their alleged dual ancestry from both Teotihuacan and the Maya. Although the bird warrior of Structure A wears bird accoutrements that appear to link him to the defeated warriors, the star enclosure glyph, the feathered serpent on which he stands, and the Three Deer Antler glyph beside his companion figure link him to the victors. As such the Cacaxtla paintings would be public proclamations of ancestry and legitimacy. At the same time, the murals also proclaim the importance of blood sacrifice as the aim of battle and the foundation of rulership (cf. Schele and Miller 1986: 103-117).

Increasing levels of militarism coupled with sacrificial rites are characteristic of the Late Classic. Similarities in costume at Cacaxtla and in the Maya Usumacinta area, along with standardized sequences of war-related events, suggest that the ritualization of warfare had become institutionalized and was geographically widespread in the early

⁶The name Xicalanca is so similar to Xicalango, an important Chontal town located on the southern end of the Laguna de Terminos (Morley, Brainerd, and Sharer 1983: 157; see also Scholes and Roys 1968: 35-36; Thompson 1970: 130-131) that I am inclined to think that the similarity is more than coincidental.

phases of the Late Classic. Furthermore, the shared astronomical connotations among the elite of these widely separated sites suggest shared ideologies as well.

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From Classic to Post-Classic in Pre-Hispanic Oaxaca

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IT IS COMMONLY ASSUMED that archaeologists who work in Oaxaca, or at least in the Valley of Oaxaca, operate with an established ceramic sequence covering some three thousand years from early village times to the Spanish Conquest. In general this assumption is correct; fairly well defined 200- to 300-year periods are recognized on the basis of changes in ceramics. One notable exception, however, is the period from about A.D. 750–1250, beginning with the demise of Monte Alban in Late Classic times and ending in the Post-Classic with the emergence of a new political order, the *señoríos* or city-states represented by sites like Mitla, Yagul, and Zaachila. The transition from Classic to Post-Classic, which includes the period known as the Epiclassic in some other areas of Mesoamerica, involved major changes in social and political organization and in religion. Attempts to study these and other changes in the archaeological record presuppose some knowledge of the temporal relations among the pertinent sites.

Most of the literature on the archaeology of Oaxaca implies that we have reliable data for the Classic to the Post-Classic transition. In the first part of this paper I argue that this is not true; on the contrary, there is a hiatus in the sequence for which cultural content is unclear. Once this is recognized, we can take stock of the available information. As I suggest toward the end of the paper, there are indications of cultural continuity in Oaxaca from the Classic to the Post-Classic. Nevertheless, demonstration and understanding of this can be achieved only by locating, excavating, and studying archaeological remains that pertain to the enigmatic period from A.D. 750–1250.

The five centuries after A.D. 750 are bracketed by two well documented periods in the Valley of Oaxaca sequence. On the early end is IIIb (or IIIb–IV, see below), the period of Monte Alban's maximum population; on the late end is the Post-Classic period V, characterized by such traits as polychrome pottery, tripod vessels with effigy head supports, gold ornaments and turquoise mosaics, and exemplified by the contents of Tombs 1 and 2 at Zaachila and Tomb 7 at Monte Alban. Ignacio Bernal (1966) has proposed a division between Va (which I will call Early V) with estimated dates from A.D. 1250–1400 and Vb (Late V) from A.D. 1400–1521. Polychrome pottery and the other traits listed above characterize Late V, but Early V diagnostics are not so clear. Bernal

mentions three kinds of gray ware vessels for Early V, "Two-tone Gray" hemispherical bowls with lighter or darker rims, composite silhouette vessels, and "jars with open pouring spout in the rim and appliqué decorations" (1966: 365). Graphite-on-red and red-on-cream pottery may also appear initially in Early V, but the period still needs to be better defined and linked to possible antecedents.

PERIOD IIIb–IV

Classic to Post-Classic developments in the Valley of Oaxaca begin with the period known as IIIb–IV in the Monte Alban sequence. A lot of confusion exists with regard to this period, partly because of ambiguities in the definition proposed by Alfonso Caso, Bernal, and Jorge R. Acosta in *La cerámica de Monte Alban* (1967). Several points set out in their discussion are relevant here.

1. They stress that IIIb–IV can be distinguished from the earlier IIIa and from the later V (1967: 381).

2. Period IIIb–IV is said to begin when Monte Alban was still flourishing, that is, when some temples and palaces were in use, and to end after Monte Alban was abandoned and some buildings had fallen into ruin. During IIIb the city was "en todo su esplendor" (Caso, Bernal, and Acosta 1967: 382), and IV refers to a period after its abandonment.

3. Caso, Bernal, and Acosta (1967: 381) define IIIb ceramics as those found in context of buildings in use while Monte Alban was still flourishing. Ceramics, for example, from offerings or burials found in the rubble of the collapsed, abandoned buildings are considered to be period IV.

4. Caso, Bernal, and Acosta recognized no distinctions between IIIb and IV ceramics other than the context in which they were found (1967: 382); therefore, in terms of the ceramic chronology IIIb–IV is *one period*.

5. As a possible explanation for the apparent contradiction (one ceramic period covering pre- and post-abandonment), Caso, Bernal, and Acosta (1967: 381) offered the suggestion that perhaps the city was not abandoned all at once and that, while some temples and palaces fell into ruin, others continued to be used and in some places new structures were built. This is a crucial point. It implies that IIIb and IV may be temporally sequential in the case of certain buildings but not for the sequence as a whole. Let's

assume, for example, that IIIb–IV spans two hundred years, that a hypothetical building, Palace 32, was occupied during the first hundred years, then abandoned and that a nearby structure, Residence 58, was occupied during the entire two hundred years. Inhabitants of Residence 58 made an “offering” of some vessels (Offering 7) in the collapsed rubble of Palace 32. Because of context the ceramics found in Palace 32 and Residence 58 are IIIb; the ceramics of Offering 7 are IV. But all belong to the same ceramic period, IIIb–IV, and the ceramics alone give no hint of temporal difference between the deposits.

Caso, Bernal, and Acosta’s treatment of IIIb–IV is unusual in that one ceramic period encompasses, at least theoretically, numerous internal distinctions between pre- and post-abandonment contexts. The unfortunate use of sequential numbers (IIIa, IIIb–IV, V) has led many archaeologists to expect to be able to find and define two distinct periods, IIIb and IV. Two examples will illustrate the results of such expectations.

The first example is taken from the Monte Alban and Valley of Oaxaca settlement pattern projects carried out by Richard E. Blanton and various collaborators. A close look at their criteria for recognizing IIIb–IV occupations in the surveys reveals a confused situation. Three studies discuss IIIb–IV definitions: Blanton’s (1978) *Monte Albán: Settlement Patterns at the Ancient Zapotec Capital*; appendix II of the same book, “Description of Ceramic Categories,” by Stephen A. Kowalewski, Charles Spencer, and Elsa Redmond, and *Monte Albán’s Hinterland, Part 1: The Prehispanic Settlement Patterns of the Central and Southern Parts of the Valley of Oaxaca, Mexico* (Blanton et al. 1982).

Table 1 summarizes the information on IIIb–IV markers in these studies. Blanton (1978: table 1.2) lists fourteen ceramic categories; Kowalewski et al. (1978) omit two of these but add three more, making fifteen categories. But

according to Kowalewski et al. (1978), chronological placement of six of these is questionable or is listed not as IIIb but as period III, so the list is reduced to nine categories. In the later study (Blanton et al. 1982) chronological placement of four of these nine categories is extended to include IIIa so they are no longer diagnostic of IIIb–IV. This leaves just five IIIb–IV categories; two kinds of *comales*, a grater bowl, a café ware conical bowl, and A.7 or imitation fine orange. Is this an adequate basis for recognizing and studying the period of greatest activity at Oaxaca’s largest and most impressive archaeological site?

For “periodization” of the Monte Alban survey, Blanton has one period called IIIb–IV, but his chronological chart shows IIIb from A.D. 450–600/700 followed by IV from A.D. 600/700–950 (Blanton 1978: 29). Monte Alban supposedly reached its maximum population in IIIb.

The city continued to grow so that sometime during Period IIIb, as far as we can tell from surface evidence, virtually all terraces were occupied . . . the IIIb maximum population was roughly 15,000–30,000. . . (Blanton 1978: 58)

Population decline may have occurred in period IV, he claims:

It is highly likely that Monte Albán was considerably reduced in population by Period IV, but I cannot estimate the magnitude of the decline since Period IV ceramics at Monte Albán are virtually identical to those of Period IIIb. (Blanton 1978: 58)

This is contradictory; there are two periods of occupation but only one ceramic complex. Without some other data or criteria—and none is presented—how can Blanton know that IIIb is a population maximum and IV a decline?

TABLE 1: PERIOD IIIb–IV CERAMIC MARKERS IN THE MONTE ALBAN AND CENTRAL AND SOUTHERN VALLEY OF OAXACA SURFACE SURVEYS

IIIb–IV ceramic categories in the Monte Alban survey (Blanton 1978)			Exclusively IIIb and/or IV categories based on first and third columns of this table	“Additional periodization” of categories for central and southern valley surveys (Blanton et al. 1982: appendix VII)	Exclusively IIIb and/or IV categories based on fourth and fifth columns of this table
IIIb–IV categories from Blanton 1978: Table 1.2 and (*)	Abbreviated description (Kowalewski et al. 1978)	Chronological placement (Kowalewski et al. 1978)			
category 1120	G. 1 olla, jar	IIIb–IV	category 1120	IIIa	
1122	G.35(?) bowl	“probably IIIb”			
1125	comal	IIIb	1125	none	category 1125
1126	G.35 bowl	III–IV			
1137	G.35 bowl	IIIb	1137	IIIa, IV	
1138	G.35 bowl	IIIb	1138	rare in IIIa and IV	
1140	G.35 bowl	III–IV			
1259	gray bowl	IIIb(?)			
1263	G.35 bowl support	III–IV			
1422	G. 1 grater bowl	IIIb–IV	1422	none	category 1422
*2083	café bowl	IIIb	2083	IV	category 2083
*2086	café bowl	IIIb–IV	2086	IIIa	
2418	café comal	IIIb–IV	2418	none	category 2418
*3030	A.7 “imitation fine orange”	Late IIIb–Early IV	3030	none	category 3030
3035	thin white/gray	unknown, IIIb?			
5085	(not included)	(not included)			
5086	(not included)	(not included)			

Actually Blanton has defined only one period, IIIb–IV, estimated to date between A.D. 450 and 950.

In their southern valley (Valle Grande) survey Blanton and his colleagues located the large hilltop site of Jalieza some 25 km southeast of Monte Alban. They attribute its main occupation to period IV which they place from A.D. 750–1000 (Blanton et al. 1981).

Following the breakup of the IIIA system, the survey area population dropped to about 32,000. Most of the decline occurred at Monte Albán and in the surrounding central area. Population of the Valle Grande grew, as several large communities were founded there. The largest site on the Period IV landscape of the survey area was Jalieza, which was reoccupied in a slightly different location than the large IIIA site. With 16,000 people, it was four times the size of any other surveyed site. (Blanton et al. 1981: 98)

This claim was toned down in a subsequent report:

The architectural and terrace size data suggest that although Jalieza was an exceptionally large site, it was probably just one of several large, autonomous Period IV centers, all with essentially the same range of functions. (Blanton et al. 1982: 128)

All of this may sound interesting and significant in terms of settlement dynamics and political organization, but with no basis for distinguishing IIIb from IV, Jalieza should probably be considered contemporaneous with Monte Alban and the settlement date reevaluated.

Similar doubts arise with regard to the supposed period IV occupation at Monte Alban.

We have attempted to estimate the site's Period IV occupation by tracing out the limits of occurrence of a known Period IV type, the A-7 (our category 3030). These sherds were found in parts of Monte Albán site subdivisions 2, 4, 6, 7, and 12 (Blanton 1978). Assuming a population density equivalent to that of the prior periods, we estimate a population of 4062. (Blanton et al. 1982: 117)

Appendix III, "Ceramic Tabulations," in the Monte Alban survey volume (Blanton 1978) shows that only nineteen sherds of A.7 (category 3030) were found on the survey, plus two sherds in excavation on Terrace 225 (Blanton 1978: 258). So one sherd represents about two hundred people.

It is not clear why Blanton uses A.7 as a "Period IV type." Caso, Bernal, and Acosta (1967: 85) consider it characteristic of period IIIb. Their study shows that A.7 vessels were found at Monte Alban in Tombs 45, 47, 52, and 92 and in the structure with which T. 52 was associated; these proveniences also contained common and typical IIIb–IV pottery such as gray and café ware (G.35 and K.14) conical bowls, gray ware *sahumadores*, and others (Caso, Bernal, and Acosta 1967: fig. 327; table xvi).

In a residential area at Monte Alban, Terraces 634, 635, and 636 (Blanton 1978), excavated in 1972 and 1973 (Winter 1974), at least six different A.7 vessels are represented in the pottery recovered in 1972 alone (Fig. 1). Forms include

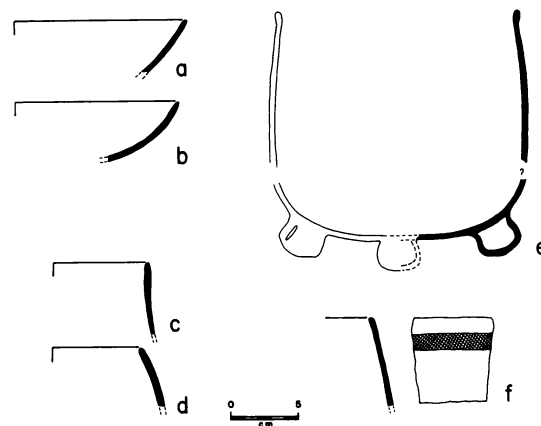


Fig. 1 Examples of A.7 pottery. (a, b) hemispherical bowls; (c, e, f) barrel-shaped vessels; (d) convergent wall bowl. a–e: 1972 excavations at Monte Alban; f: schematic representation of sherd with incised band on exterior, found at Monte Alban and Lambityeco.

hemispherical bowls similar to those reported by Caso, Bernal, and Acosta (1967: fig. 327c, d) and barrel-shaped or convergent wall bowls with plain rims and with thickened rims. Examples with an incised band on the exterior also occurred in the 1972 and 1973 area as well as at Lambityeco where they are considered local or imported Balancan or Z fine orange (Paddock 1983a: 203). At least one sherd of an A.7 barrel-shaped bowl with incised band was found at Monte Alban in an area of IIIb–IV houses on Terrace 30 (Blanton 1978) during repair work in 1980. The point is that A.7 occurs in context of the IIIb occupation at Monte Alban and should not be considered chronologically later than that occupation. It is not particularly common but probably more so than the survey results suggest, and it has been found with simple IIIb households (1972 and 1973 excavations) and intermediate size households (Tombs 45, 47, 52, and 92).

A second example of the confusing and confused IIIb–IV situation involves the site of Lambityeco about 30 km east-southeast of Monte Alban in the Tlacolula sector of the Valley of Oaxaca. John Paddock directed surveys and excavations at Lambityeco during various seasons in the 1960s and 1970s; Lambityeco is actually part of a larger site, Yegüih, which includes some 230 mounds distributed over 75 hectares (Paddock 1983a). According to Paddock, Lambityeco is a period IV site:

On the northwestern part of the site there is a concentration of some 70 mounds which were occupied exclusively in Monte Albán IV; this is the area for which we were given the local name, "Lambityeco." Lambityeco is therefore defined as an area of pure Monte Albán IV occupation within a larger archaeological zone known as Yegüih. . . . (Paddock 1983a: 197)

In fact, Paddock considers Lambityeco to be "Early Period IV" (1983a: 200, 202), implying that an Early and a Late IV can be recognized.

What does Paddock mean by period IV? He implies that the IV occupation at Lambityeco is in part contemporaneous with IIIb at Monte Alban, noting that "some construc-

tion went on at Monte Albán after Lambityeco had come and gone" (1983b: 187). And he apparently accepts the cluster of radiocarbon dates from Lambityeco between A.D. 640 and 755 as valid for what he calls Early period IV (1983a: 201). Thus for Paddock Lambityeco is temporally distinct in that it occupies a relatively short period within the span of Monte Alban's occupation.

Other factors also distinguish Lambityeco from Monte Alban.

Lambityeco's culture cannot be accommodated in Monte Albán IIIb, for it includes many traits that are not a part of IIIb, and quite a few of these traits had already been identified (before work began at Lambityeco) as marks of Period IV in the Monte Albán excavations. (Paddock 1983b: 187)

Paddock doesn't tell us what IV traits were already recognized in the Monte Alban excavations, but he does provide an extensive list of what he calls "Lambityeco (Early IV) traits" including six categories: architecture, inscriptions, iconography, funerary customs, techniques, and ceramics (1983a: 202–203). The temporal and spatial status of these traits is not completely clear, as Paddock notes:

It should be kept in mind that this list almost certainly includes some peculiarities that are local or personal rather than temporal; that is, a given new trait may be a true Period IV marker, but valid only for Lambityeco or even for the work of a single craftsman. Only study of other Period IV sites will tell us which traits are valley-wide Period IV diagnostics and which are local. . . . (1983a: 202)

Specific traits such as "nonportable sculpture; old man holding human femur, distal end cut off" (Paddock 1983a: 202) are probably of limited utility for temporal or spatial comparison since from a practical or theoretical standpoint the chances of finding other examples are unlikely. Some of the listed traits, however, do occur at other sites. For example, *grecales* are present at Monte Alban and Atzompa (Sharp 1970) in buildings constructed while those sites were flourishing, that is, during period IIIb by Caso, Bernal, and Acosta's (1967) definition.

Some of Paddock's nonspecific Lambityeco traits may well have a spatial distribution that excludes Monte Alban. For example, some types of figurines found at Lambityeco are uncommon if not unknown from Monte Alban, and this may be true of some of the functionally specific vessels used in salt production at Lambityeco. On the other hand, many IIIb traits common at Monte Alban also occur at Lambityeco. Among these one might note most, if not all, of the ceramics listed as IIIb–IV by Caso, Bernal, and Acosta (1967), including A.7 and the ubiquitous G.35 bowls. Others include such diverse traits as ceramic urns, painted tomb murals, residential layout, some tomb and burial patterns, and occurrence of the nonresidential architectural unit which I call the temple-patio-adoratorio complex (Winter 1986).

Paddock's intention seems to be to separate Lambityeco both temporally and spatially (that is, artifactually or cultur-

ally) from Monte Alban. To claim that Lambityeco has a short temporal span within that of Monte Alban requires that he demonstrate Monte Alban's long span and Lambityeco's short span. However, Lambityeco's span, based on radiocarbon dates, is about A.D. 600–800 and Monte Alban's is about the same, A.D. 550–800 (see below). Monte Alban has not been shown to continue to A.D. 900 or 1000, as is often implied in the literature.

To show convincingly that Lambityeco is culturally distinct from Monte Alban, Paddock would have to list specific elements of difference, but, as mentioned above, except for some unique items, the similarities seem to be at least as evident as the possible differences. Monte Alban and Lambityeco appear to be two among several manifestations (Macuixochitl, Dainzu, Cerro de la Campana, Jalieza, etc. would be others) of ancient Zapotec culture in the Valley of Oaxaca in IIIb–IV times. Additional data, not yet forthcoming, would be required to show divisions within this single period, such as an Early and a Late IIIb–IV. For the time being we have no workable definition for separating a period IV or a site like Lambityeco from IIIb–IV as known from Monte Alban.

DATING PERIOD IIIb–IV

Samples from Lambityeco provide the most consistent and apparently reliable groups of radiocarbon dates for the IIIb–IV span. Six of seven determinations cluster between A.D. 640 and 755 (Rabin 1970), and if we allow fifty years on each side, the site can be dated between A.D. 600 and 800.

Dating of period IIIb at Monte Alban is not quite so clear. Three radiocarbon determinations on samples collected during the 1972 excavations (Winter 1974) provide dates around A.D. 700.¹ One sample was taken from a shallow oven, Feature 19, containing IIIb–IV sherds. The other two were from Feature 20, an area of fill containing Late I and II ceramics which led me to expect earlier dates. Though inconsistent with the ceramics, these two dates may actually relate to the last occupation in the excavated area. Perhaps they derive from burned posts embedded in earlier fill or charcoal somehow mixed with earlier midden material.

Most IIIb structures at Monte Alban, including both residences and large nonresidential buildings such as the platforms around the Main Plaza, reveal two or three construction stages which were probably realized within two hundred years or less. The IIIb occupation in the 1972 and 1973 excavation area probably did not span more than three or four generations. Three period IIIb houses were excavated, and two of them showed evidence of rebuilding or modification. In one case about 10 cm of fill was laid over the central patio and then covered with a new stucco floor. A IIIb pottery kiln intrusive into the west side of this house represents a third stage of use. The sequence proba-

¹The three samples are:

- Tx-1814. A.D. 600 ± 80. Feature 20. Late I pottery was noted during excavation.
- Tx-1815. A.D. 700 ± 100. Feature 19, a circular hearth(?) with IIIb–IV ceramics.
- Tx-1816. A.D. 720 ± 80. Feature 20. Period II pottery was noted during excavation.

bly spans no more than three generations, certainly no more than two hundred years.

Other IIIb residences at Monte Alban that I have had a chance to study in connection with repair and conservation show a similar pattern. For example, the houses associated with Tombs 125 and 172 may have been rebuilt (rooms raised and refloored) two or three times, but probably represent no more than two hundred years. The contents of Tomb 172 suggest two or three successive reopenings of the chamber and placement of new offerings and burials, but only two or three generations are indicated. The three IIIb houses on Terrace 30 also suggest two or three stages of rebuilding and modification. From these data I estimate that IIIb–IV is approximately two hundred years long, at least at Monte Alban. I suggest it began around A.D. 550 and ended around 800 which would make it roughly contemporary with the Lambityeco occupation.

A.D. 750–1250

Thus far I have argued that by original definition, and in spite of the unfortunate choice of numerical designations, IIIb–IV represents a single ceramic period and that, despite attempts and claims to the contrary, no one has shown the existence of sequential and distinct periods IIIb and IV. Radiocarbon determinations indicate that IIIb–IV dates between A.D. 640 and 755, and construction sequences at Monte Alban suggest that the period lasted for no more than two hundred years; generous outside limits might be A.D. 500–800. Monte Alban's apogee falls within this period and Lambityeco is contemporaneous with it. According to this argument, there is no established basis for a temporal sequence of IIIb followed by IV, so discussions about settlement changes at Monte Alban or elsewhere in the valley for these "periods" are without basis. Nor is there a basis for claiming that Monte Alban's occupation continued until A.D. 1000 (whether as IIIb, IV, or IIIb–IV).²

I have discussed IIIb–IV at some length because it has generally been accepted that this period fills in the time from Monte Alban's demise to the Post-Classic.³ How-

²The problem of Classic to Post-Classic change occurs in other regions of Oaxaca. In the Nochixtlan Valley of the Mixteca Alta the Classic and Post-Classic were initially defined and dated as the Las Flores phase from A.D. 500–1000/1100 and the Natividad phase from 1000/1100–1520/1535 (Spores 1972). Radiocarbon dates obtained through more recent work in the region date the Las Flores phase securely between A.D. 200–550 (Ramírez n.d.). Radiocarbon determinations later than A.D. 1300 associated with Natividad phase material are acceptable. But the few dates between A.D. 600–1300 are ambiguous or misleading in terms of associated ceramics. Thus the Mixteca Alta sequence also has a problematical undocumented period from approximately A.D. 600–1300. This situation may be remedied in part by the results of a surface survey in the Tilantongo area carried out by Bruce E. Byland and John M. D. Pohl during July and August 1985. Byland (n.d.) believes there is evidence for Classic to Post-Classic continuity there.

³The writings of Blanton and associates and of Paddock were chosen to illustrate these problems because they are the only archaeologists after Caso, Bernal, and Acosta who have attempted to define or redefine IIIb–IV. Other discussions in the literature about what happened in Oaxaca from A.D. 750–1250, including mention of Toltec influence and shifting ethnic groups, are certainly within the realm of possibility but are simply too speculative and unfounded to warrant consideration here.

TABLE 2: LIST OF 21 RADIOCARBON DATES FROM OAXACA, A.D. 600–1300

A.D.	Site	Laboratory No.
600	Monte Alban	Tx-1814
620	Cueva Blanca	M-2091
620	Guila Naquitz	M-2096
640	Lambityeco	GX-1480
690	Lambityeco	GX-1482
690	Yucuita	GX-1924
700	Lambityeco	I-3258
720	Monte Alban	Tx-1816
720	Lambityeco	I-2679
730	Lambityeco	I-3257
740	Monte Alban	Tx-1815
740	Guila Naquitz	SI-514
755	Lambityeco	GX-1573
835	Pasa a Carrera	GX-1614
840	Mitla	M-1251
890	Yagul	M-1151
940	Hierve el Agua	M-2105
1055	Lambityeco	GX-1481
1175	Yucuita	GX-1290
1200	Yagul	M-1248
1270	Guila Naquitz	SI-513

Data abbreviated from Drennan 1983.

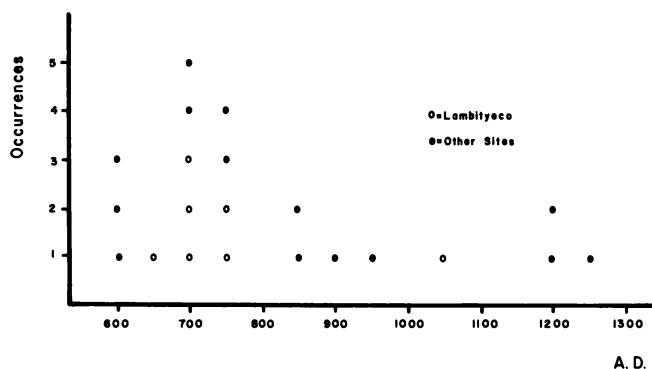


Fig. 2 Distribution to nearest fifty years of twenty-one radiocarbon dates from Oaxaca A.D. 600–1300.

ever, in light of this reconsideration of the IIIb–IV data, and if, as generally accepted, period V dates around A.D. 1250–1521, then the following questions arise: What happened between A.D. 750 and 1250? What is the cultural content of this five-hundred-year period? What archaeological remains correspond to this period? Why were Monte Alban and Lambityeco abandoned, where did the people go, and what kinds of communities and organization followed? Why have we not recognized diagnostic ceramics for this period? Was the Valley of Oaxaca abandoned? Are the radiocarbon dates wrong?

I don't believe we can answer these questions at the

Zapotecs probably continued as the principal linguistic and ethnic group in the Valley of Oaxaca from Classic through Post-Classic times. During the period A.D. 750–1521 there is evidence of change in linguistic and ethnic groups in various regions of the state. Pochutec, Huave, and Chontal groups may have arrived for the first time in Oaxaca; Mixe and Zapotec groups apparently changed locations in the Isthmus; Nahuatl speakers may have moved into northern Oaxaca, and so forth (Winter et al. 1984). The Aztec intrusion into the Basin of Mexico may have stimulated some of these changes. Archaeological data may eventually help us determine whether they occurred between A.D. 750–1250 or later.

moment because of the paucity of relevant available archaeological data. To illustrate what data actually are available we can look at the radiocarbon dates reported from Oaxaca that fall after A.D. 600 and before 1300. Twenty-one dates are reported (Table 2) and are plotted in Figure 2 to the nearest fifty years. As mentioned above, six of the seven dates from Lambityeco and the three dates from Monte Alban can be assigned to IIIb–IV. Three dates from the Mitla caves (M-2091 from Cueva Blanca; M-2096 and SI-514 from Guila Naquitz) also fall within the IIIb–IV range, as does one other date, GX-1924, from Yucuita in the Mixteca Alta region. Spores (1972: 172) calls GX-1924 Late Ramos phase, but I place the end of Ramos around A.D. 100 (Winter 1982) and consider the date much too late for Ramos. Associated ceramics are not reported, so the sample's context cannot be evaluated.

The eight remaining dates are from A.D. 800–1250 and are the important ones in terms of our enigmatic period. Two of them, one from Yagul (M-1248) and one from Guila Naquitz cave (SI-513), are around A.D. 1200 or later; they are considered period V by their excavators so probably can be attributed to the Late Post-Classic or at least squarely within period V. GX-1290, from Yucuita, is called Late Las Flores phase by Spores (1972: 172). This is questionable since the associated ceramics include three categories out of eleven reported that are characteristic of the Late Post-Classic Natividad of the Colonial Convento phase (Spores 1974: 3–5).

The five remaining dates are worth examining in some detail since they are neither clearly IIIb nor V. The fact that they are spread through the sequence is interesting in itself and suggests that at least there was human occupation in the Valley of Oaxaca between A.D. 750 and 1250.

GX-1481. This is from building 195 sub at Lambityeco, apparently a house. The date is considered anomalous, too recent by approximately three hundred years, since the building is well dated by other radiocarbon determinations (Rabin 1970).

GX-1614. This date is from the site Pasa a Carrera in Mitla on the road to Xaaga. A photograph of the excavation (Paddock 1983c: 35) shows the corner of a patio or room of a residential structure. Descriptions of the excavation and associated ceramics have not been published, but Paddock dates the structure as period V and reports that G.3M pottery was found (personal communication, 20 June 1985).

M-1151. This date is from a burned wooden beam of an unexplored structure between Tombs 10 and 11 at Yagul (Paddock, personal communication, 20 June 1985). Both tombs and the structure were encountered in excavation of a trench in Mound 5-W (Paddock 1955). Tomb 10 contained fourteen G.35 bowls, two *sahumadores*, and a figurine; Tomb 11, stratigraphically later, contained fine gray and graphite-on-red ceramics (Paddock 1955). The ceramics suggest that Tomb 10 is IIIb–IV and Tomb 11 is Early V. If the radiocarbon date is correct, the intermediate structure may date within the enigmatic period A.D. 750–1250, and Yagul is therefore a site that could help resolve questions about the Classic–Post-Classic transition.

M-1251. This date is based on a sample collected by Ignacio Bernal from Cruciform Tomb 3 in Mound 40 of the South Group at Mitla. (It should not be confused with the Tomb 3 described by Caso and Rubín de la Borbolla [1936].) The tomb has been looted and much of its structure destroyed, but Bernal determined that mosaic patterns adorned some walls. Four miniature ceramic vessels were found, all attributed by Bernal to period V: a café ware and a gray ware tiger claw vessel, a tiny bowl, and a gray ware fragment with appliqué decoration (Bernal 1963: 230). To the west, just outside the tomb wall, the fill contained abundant ash and charcoal, and Bernal (1963: 228) mentions collecting samples; presumably this was the material sent for radiocarbon analysis.

It is evident from Bernal's description and a cross-section drawing that five stuccoed floors occur in the mound stratigraphically above the level of the tomb wall and the sampled fill. Sherds recovered in the tomb which derive from the mound fill lack polychrome and are attributed by Bernal (1963: 230–232) to Early period V. He notes that the tomb corresponds to the early construction of Mound 40, and perhaps to the oldest construction in this area of Mitla (1963: 231).

Bernal (1963: 232) reports the radiocarbon date as A.D. 1110 ± 110 , but according to Robert D. Drennan (1983: 367) it should be A.D. 840 ± 110 (1110 is the radiocarbon age: $1950 - 1110 = 840$). The date falls between A.D. 750–1250 and suggests that Mound 40 and the South Group at Mitla were constructed at least in part during our enigmatic period. Some of the tomb's elements, such as *greas*, a vertical column in the center, and the cruciform shape, are familiar from other Mitla tombs. If applicable to the tomb itself, the radiocarbon date would suggest considerable antiquity for these elements. The South Group is obviously a prime candidate for research designed to study the period A.D. 750–1250.

M-2105. This sample is from 75 cm depth in Test 1 at Hierva el Agua. Associated ceramics are not described.

All five samples are from sites in the Mitla-Tlacolula area. It remains to be determined whether this reflects a large population relative to other parts of the valley or simply that more late sites have been excavated here than in other areas.

It is unfortunate that there is almost no information on the ceramics associated with these dated contexts. But given the amount of looted and accidental finds in the Valley of Oaxaca, it seems likely that we have seen the main varieties of pottery for the later periods, unless there was a drastic population decline and only a few sites occupied.

Needed now is a detailed study and classification of ceramics that might span the period from A.D. 750 through Early V with special attention to discrete categories of form and decoration.⁴ This could be done in connection with some

⁴During its period of power and influence Monte Alban presumably coordinated or sponsored craft production. It is interesting to note, however, that in period IIIb–IV at least some utilitarian ceramics were being produced by households as part-time specialization. The small scale and dispersed production meant that although there seem to be standard

excavations, perhaps at Mitla, Yagul, or other Tlacolula Valley sites with probable occupations between A.D. 750–1250. The undisputed importance of the Tlacolula-Mitla area in period V, manifested in sites like Mitla and Yagul, makes this a favorable study area. Elsewhere in the valley, some unpublished tomb offerings from Aleman Etla are possible candidates for the period of concern here, but no structures have been exposed. At Zaachila there are ceramics clearly attributable to IIIb–IV and V; there may also be ceramics and occupation dating from A.D. 750–1250 that have simply not been recognized as such.

CLASSIC–POST-CLASSIC CONTINUITY

In spite of the hiatus from A.D. 750–1250 in the chronological and cultural sequence, some elements of IIIb–IV culture in the Valley of Oaxaca are important and notable in Late V. These elements somehow continued, and the cultural tradition did not disappear.

1. Residential structures. The IIIb pattern of closed format residences continues in high status houses of Late V at Mitla, Yagul, and Zaachila, for example. (Common houses in period V were simple rectangular structures in contrast to the simple Type 1 houses of IIIb.) The closed residential layout also occurs in Late Post-Classic high status houses in the Cañada (Santa Cruz, Cerro Hidalgo, for example), so this may be a wider pattern not necessarily derived directly from Monte Alban.

2. Tombs. In IIIb–IV tombs or crypts for preserving the remains of the principal ancestors formed an integral part of the residence. The reuse of tombs from generation to generation marked continuity in the family and in some cases reflected and legitimized the power of the elite. In Late V tombs occur in Mitla, Yagul, Zaachila, and other sites. The number of individuals buried in these tombs is usually greater than in the IIIb–IV tombs. For example, at Zaachila eleven individuals were found in Tomb 1 and nineteen in Tomb 2 (Gallegos 1978: 77, 97–98), and at Yagul Tomb 24 contained more than twenty individuals (Bernal and Gamio 1974: 25). In some cases the form and placement of Late V tombs also differs from IIIb–IV patterns. Some late tombs are unusually long and narrow, perhaps to accommodate more individuals, and they sometimes occur below patios that appear to be administrative, nonresidential spaces. Examples are Tombs 1 and 2 in the large south patio of the Group of the Columns in Mitla and Tombs 23 and 24 at Yagul. Also, some individuals were apparently placed as secondary burials, in contrast to the primary, though often rearranged, IIIb–IV burials. The large number of individuals in the Late V tombs may mean that instead of immediate family members as in IIIb–IV, a wider range of dependents were buried in some tombs. But

the practice of burial in tombs, in the broad sense, occurs in the Classic and Post-Classic.

3. Carved bones. Finely carved animal bones showing dates, human faces, and decorative motifs were found in IIIb context in Tomb 11 at Lambityeco. These anticipate the technique of carving and especially the use and importance of carved bones in period V exemplified by the bones from Tomb 7 at Monte Alban.

4. Mural painting. Polychrome murals occur on tomb walls (Tombs 103, 104, 105, and 112) and facades (T.125) in period III at Monte Alban and at Lambityeco (T.11). The murals represent personages and names or dates. This mural painting is a possible antecedent of the codices and other painted manuscripts which, in similar style, show human figures in scenes with dates, names, and other historical and ritual information (Miller n.d.).

5. Motifs. Some Late Post-Classic symbols and designs have antecedents in period IIIb–IV or earlier in the Valley of Oaxaca. Examples include *grecas*, the *xicalcolihqui* motif, and the fire serpent or *yahui* (Lintel 1 at Monte Alban).

6. Architecture. In addition to the closed residential pattern mentioned above, the double-framed sunken *tablero* characteristic of Monte Alban IIIb is also present in V. The enclosed patio seen in the IIIb residences and in the nonresidential temple-patio-adoratorio complex is antecedent to the Late V nonresidential patios at Mitla and Yagul.

Other examples could undoubtedly be mentioned, but these are sufficient to suggest Classic to Post-Classic continuity. Some characteristics, such as carved bones, codex-style paintings, and certain symbols and designs, are widespread in Post-Classic Mesoamerica and form part of the Post-Classic Religious Style (Smith and Heath-Smith 1980) or what has often been termed the Mixteca-Puebla style (Nicholson 1982). As Paddock (1982) has pointed out, the Valley of Oaxaca presents an outstanding manifestation of the Mixteca-Puebla style, but it is also possible, as I have implied, that some of these late pan-Mesoamerican elements originated among (presumably Zapotec) inhabitants of the Valley of Oaxaca during the Classic period. To demonstrate and understand this, however, archaeological research must focus on the period from A.D. 750–1250. Previous studies in Oaxaca have tended to obscure this problematic period by arbitrarily extending the sequence or juggling diagnostic ceramics. The present reexamination of the data permits us to recognize the hiatus and thus take a first step in trying to trace the development from Classic to Post-Classic in this area of Mesoamerica.

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forms in gray and café ware conical bowls, the pottery is generalized and lacks detailed decorative attributes useful for establishing chronological divisions. Because there are few or no discrete attributes to follow, other criteria such as figurines, urns, and specialized pottery may prove to be more sensitive chronological markers in future studies. The absence of urns in the Post-Classic is an interesting change from the Classic; it remains to be determined exactly when and why this occurred as well as its implications for religious-ceremonial practices.

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Obsidian Working, Long-Distance Exchange, and the Teotihuacan Presence on the South Gulf Coast

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CIVILIZATIONS ARE COMPLEX SOCIOCULTURAL SYSTEMS characterized by hierarchical organization and integration by the state (Fried 1967; Claessen and Skalkin 1978). All states are economically stratified societies, generally with a highly centralized government and a professional ruling class which maintains a monopoly on the use of coercive force. Civilizations are also internally differentiated, with a variety of occupational specialists. According to Flannery (1972: 409), the degree of complexity exhibited by a state can be measured "in terms of its *segregation* (the amount of internal differentiation and specialization of subsystems) and *centralization* (the degree of linkage between the various subsystems and the highest-order controls in society)."

Craft specialization is a form of segregation in which goods are made by specialists for exchange beyond the production site. For many archaeologists the development of economic systems containing great numbers of craft specialists is one of the most important factors affecting the rise of early civilizations. The importance of the interrelationship between craft specialization and the emergence of complex society was first explicitly stated by V. Gordon Childe (1934, 1942, 1950). For Childe the development of irrigation agriculture permitted the production of surpluses

which led to the rise of itinerant specialists, who eventually gravitated toward centers where surpluses were stored. Although more recent attempts to explain the development of complex society have cast serious doubt on the universality of the causal linkages in Childe's model, few scholars writing in the past two decades have questioned the notion that urban centers were composed primarily of specialists (Sanders and Price 1968; Adams 1977; Weaver 1981).

Recent work in Mesoamerica indicates that levels of craft specialization varied dramatically from one region to the next in the Classic period. In the Maya Lowlands, for example, craft specialization was not well developed, and production was decentralized (Webster 1985). Although sites located near chert deposits, such as Colha, supported greater numbers of specialists (Shafer and Hester 1983), craftsmen at large Maya centers such as Tikal and Copan probably rarely comprised more than 5 percent of the total population (Becker 1973; Fry 1980; Mallory n.d.). Areas such as the Valley of Oaxaca apparently contained more craft specialists who produced a broad array of goods. In the Classic period most craft production was centered at Monte Alban, but specialists were also present at rural sites (Blanton 1978; Blanton et al. 1982; Nicholas and Feinman n.d.).

The most impressive urban centers in Pre-Hispanic Mesoamerica arose in Central Mexico (Millon 1973, 1976; Sanders et al. 1979; Diehl 1981). These urban centers were large, highly nucleated communities, often with populations of sixty thousand persons or more, which occasionally exercised political control over large parts of Mesoamerica (Sanders and Price 1968). Craft specialization was somewhat better developed in Central Mexico than in the Valley of Oaxaca or the Maya Lowlands. At the Aztec capital of Tenochtitlan, for example, virtually all of the population, including food producers, were specialists of one form or another (Berdan 1982; Hassig 1985; Sanders and Santley 1983).

At Teotihuacan, in contrast, about 25–35 percent of the population were specialists: a value considerably less than Tenochtitlan but still significantly greater than Monte Alban (Millon 1976, 1981; Ester n.d.). Moreover, at Teotihuacan, Tula, and probably Tenochtitlan as well, obsidian

I wish to thank the people of the modern communities of Maticapan, Sihupapan, Caleria, Comoapan, San Andres Tuxtla, and San Isidro Texcalitlan, especially Lic. Miguel Turrent, Lic. Carlos Silva, Lic. Miguel Castillo, and Carlos Turrent, for their assistance throughout various stages of our research in the Tuxtlas. Special thanks are reserved for Robert H. Cobean and Ponciano Ortiz Ceballos, project ceramist, for keeping the Maticapan Project afloat in its formative years, as well as all of the archaeologists who worked as crew chiefs and volunteers over the years. I also thank Angel García Cook, Joaquín García Barcena, and Daniel Molina Feal for expediting permit requests and facilitating our research efforts. Research in the Tuxtlas region was conducted with the permission of the Instituto Nacional de Antropología e Historia in Mexico City. During the course of the Maticapan Project Robert S. Santley acted as general project director, with Richard A. Diehl as field director in 1982 and 1983 and Christopher A. Pool as field director in 1986. Information presented in this paper is based primarily on data collected during the 1982, 1983, and 1984 field seasons. Evidence from the 1986 field season has been included when appropriate. This research would not have been possible without grants from the University of New Mexico, the Tinker Foundation, the Mellon Foundation, and particularly the National Science Foundation.

working was a major industry (Spence 1981, 1984; Healan et al. 1983; Santley 1986). The presence of this industry has been used as evidence that Teotihuacan controlled long-distance obsidian exchange networks throughout Mesoamerica which in turn explains why a large share of the city's population were specialists of one form or another (Parsons and Price 1971; Santley 1983; Santley et al. 1986). If Teotihuacan dominated long-distance exchange in a manner like the Aztecs, then the withdrawal of that control ought to have repercussions at sites that were formerly part of the network. Indeed, such arguments are common in the literature. For example, the decline of Teotihuacan is thought to have caused the abandonment of Monte Alban (Blanton 1978) and the Classic Maya hiatus (Willey and Shimkin 1973), as well as affecting changes in regional settlement patterns and the rise of successor states in Central Mexico (Sanders et al. 1979).

This paper examines the impact that Teotihuacan's decline had on exchange networks distributing obsidian to the South Gulf Coast. In considering this problem I deal with a number of topics. First, I present a model describing the organization of the Teotihuacan state and its relationships throughout Mesoamerica. Next, I discuss the archaeological record at Maticapan: a large Classic period center in the Tuxtla Mountains of southern Veracruz where recent research has revealed evidence of a substantial Teotihuacan presence. I then describe the obsidian production-distribution system at Maticapan, focusing on material from both the Middle and Late Classic periods. Obsidian, it is clear, was one commodity traded to the Tuxtla in volume, perhaps by Teotihuacan merchants traveling in large caravans. The question of why Teotihuacan established a base in the Tuxtla and what readjustments, if any, occurred after the withdrawal of that presence are dealt with in the concluding section.

THE TEOTIHUACAN PRESENCE IN MESOAMERICA

Teotihuacan was one of the largest urban centers in Pre-Hispanic Mesoamerica (Fig. 1). At its height in the Middle Classic period the city covered about 20 km², with an estimated population of 125,000 persons (Millon 1973, 1976, 1981). Approximately one-third of its population were specialists of one form or another, with the largest number involved with the city's central industry, obsidian working (Ester n.d.; Millon 1981; Spence 1981, n.d.b).

Following Spence, Teotihuacan's obsidian production-distribution system involved a series of workshop classes producing for different clienteles. Blade core reduction was a staged activity, with different segments of the reduction process taking place at different sites. Most heavy percussive work and initial blade core reduction, for example, probably took place directly at the Pachuca mines, the primary source used by knappers at Teotihuacan (Charlton and Spence 1982; Santley et al. 1984). The final stages of blade core preparation occurred at workshops in the city, after which either prismatic blades were removed or the prepared core exchanged (Spence 1981, 1984, n.d.b). While only 7 percent of Teotihuacan's population was involved in

some fashion with obsidian working, the scale of the industry was sufficient to provide for the annual needs of literally millions of consumers if production was full-time (Sanders and Santley 1983; Santley 1984). In other words, if Spence's estimates of the number of specialists present are reasonable, then much of the hinterland serviced by the city's workshops probably lay beyond the Basin of Mexico, the core area of the Teotihuacan state.

Although Pachuca obsidian is common only in Central Mexico and the Valley of Oaxaca, it is also present in virtually every lithic assemblage from Mesoamerica at large. In addition, the incidence of green obsidian peaks in the Middle Classic (Appel n.d.; Moholy-Nagy 1975; Santley 1983; Spence n.d.c), and Spence's work on the history of the city's obsidian industry indicates that much of this development came after Teotihuacan had attained truly gigantic proportions.

The development of Teotihuacan's obsidian industry coincided with the spread of Teotihuacan influence throughout Mesoamerica (Coggins n.d., 1983; Parsons 1978; Pasztory 1978). By influence I mean the occurrence of architecture, sculpture, and/or portable objects of supposed Teotihuacan origin, derivation, or inspiration. Although many of these objects appear to be copies that were locally made by persons familiar with elements of the Teotihuacan style, others appear to have been imported directly from the urban zone or from centers closely associated with Teotihuacan.

Sites exhibiting contacts with Teotihuacan fall into three descriptive categories: enclaves, interactive nodes, and receiver nodes (Santley 1983). Teotihuacan enclaves are sites such as Kaminaljuyu, Tikal, and Maticapan which apparently contained barrios of resident Teotihuacanos. Enclaves are typically located near deposits of raw materials that were widely traded in antiquity. For example, Kaminaljuyu appears to have dominated the El Chayal complex of obsidian deposits, one of the major sources utilized by the Peten Maya (Parsons and Price 1971; Sanders and Michels 1977). Teotihuacan interactive nodes, in contrast, are not situated in special resource zones. Rather, they appear to have been politically important centers that were centrally located relative to demand for exotic resources. Monte Alban and Cholula are two examples of this class of center (Blanton 1978; Sanders and Santley 1983).

Teotihuacan receiver nodes represent the third class of contact situation. Generally, only portable objects exhibit Teotihuacan influence, although the number and kind of object present is often quite variable. Receiver nodes, it appears, served as outlets for goods from Teotihuacan or Teotihuacan-connected centers, which were used locally to reinforce status differentials and political alliances (Ball 1983; Blanton and Feinman 1984; Spence n.d.c). The number of different kinds of goods present at receiver nodes displays a distinct pattern of falloff when graphed in terms of distance from Tikal and Monte Alban, implying that interactive nodes and enclaves may at times also have acted as major points of supply (Appel n.d.; Santley 1983).

The goods that were moved over the landscape came from a number of regions, not simply from Teotihuacan.

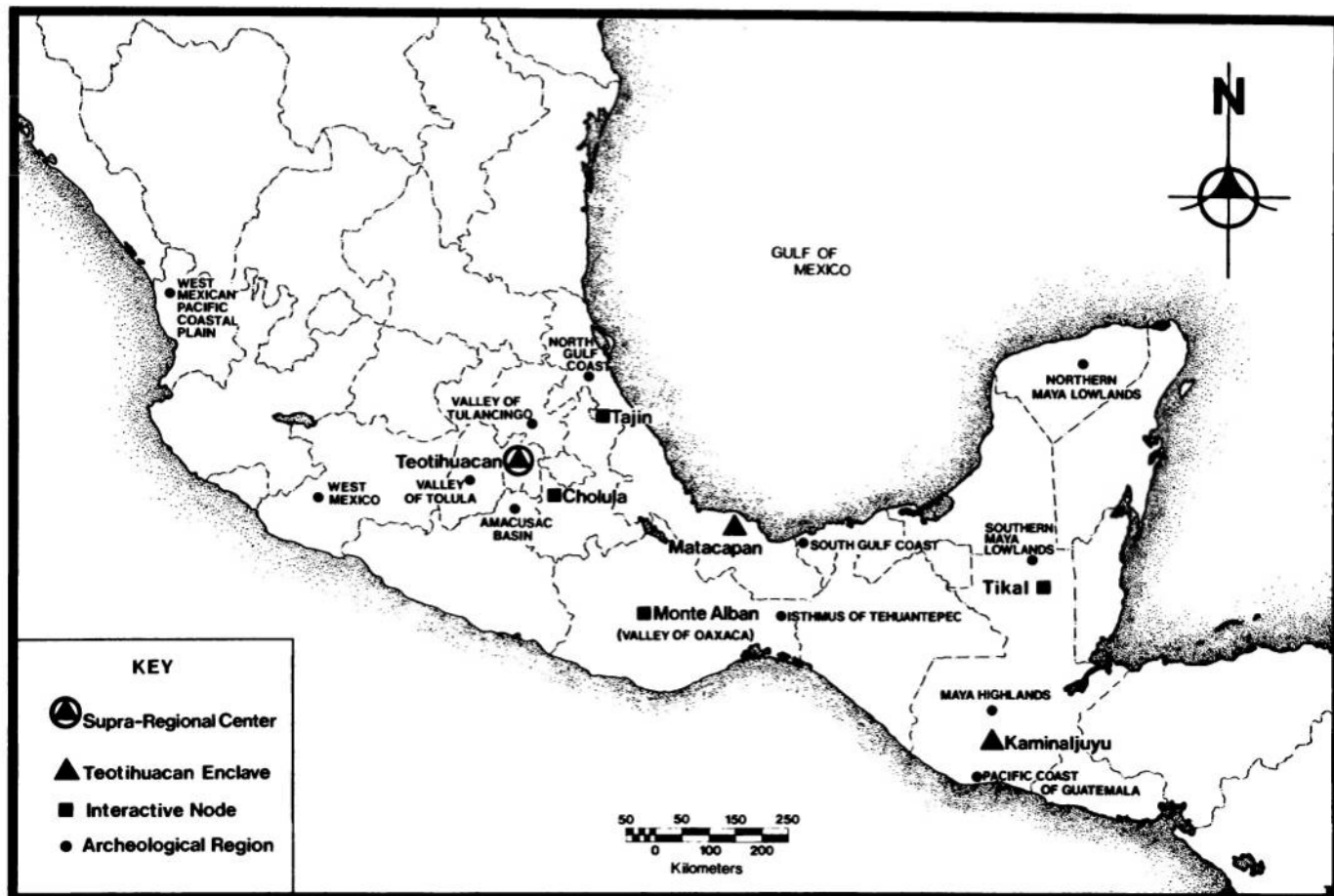


Fig. 1 Mesoamerica showing major archaeological sites.

Obsidian provides the most complete data set currently available. Of the scores of obsidian sources that occur in Mesoamerica, only obsidian from four sources, Pachuca, El Chayal, Ixtepeque, and the complex of deposits flanking and to the north of Pico de Orizaba volcano, were very widely distributed. Each of these sources is also surrounded by a hinterland which was reliant on that material in fairly large quantities. Obsidian from the Pachuca source, for example, is unusually abundant only in Central Mexico and Oaxaca (Santley et al. 1986; Appel n.d.). Obsidian from the complex of sources in north central Veracruz, on the other hand, is the dominant component in lithic assemblages on the Gulf Coast and the Isthmus of Tehuantepec (Hester et al. 1971a, 1971b; Jack et al. 1972; Zeitlin 1978, 1982; Santley et al. 1984, 1985c). Ixtepeque obsidian is common in the eastern and southeastern Maya Lowlands, whereas material from the El Chayal source predominates in the Peten and Southern Maya Lowlands (Hammond 1972; Moholy-Nagy 1975; Stross et al. 1983; Hammond et al. 1984; Moholy-Nagy et al. 1984; Rice 1984).

Sumptuary goods such as cacao, cotton, jade, greenstone, turquoise, ilmenite, kaolinite, feathers, hallucinogenic mushrooms, and shells were probably also traded long distances through the same network (Brown 1984; Parsons and Price 1971; Voorhies 1982; Webb 1975). These

goods display many of the properties that make obsidian so amenable to long-distance exchange; that is, they are goods to which transport adds little to the final delivery cost (Santley 1984). Teotihuacan pottery, cylindrical tripod vases in particular, was also widely distributed. In most cases, however, these vessels were locally made imitations of Teotihuacan pottery, not imports from the urban zone (Kidder et al. 1946; Ball 1983; Berlo 1984; Santley et al. 1984, 1985c).

Elsewhere, I have suggested that the model which best fits this patterning involved a system in which a cartel of power centers, all under the control or influence of Teotihuacan, attempted to dominate the distribution of exotic resources to the most densely settled parts of Middle Classic Mesoamerica (Santley 1983). Ties between centers either in control of exotic resource zones or centrally located relative to distribution spheres appear to have been especially important, and there is evidence suggesting that occasionally intermarriages between local dynastic elites and Teotihuacanos or persons with strong Teotihuacan connections were employed to buttress political linkages between centers (Coggin n.d.; Marcus 1980; Sanders 1977). If this model is an appropriate characterization of Middle Classic exchange organization, then what was Teotihuacan's role in the system? First, it is likely that Teotihuacan acted as a major production center, at least as

far as obsidian was concerned.¹ More important, I believe that Teotihuacan played a significant role in long-distance distribution.

Major commercial centers of the type proposed for Teotihuacan exert profound effects on system political-economic organization (English 1966; Johnson 1970; C. Smith 1976; Vance 1970). If Teotihuacan was the center of a vast marketing hinterland for obsidian and probably other commodities, then the city and its local hinterland ought to exhibit many of the properties of a dendritic central-place system (Bray 1983; Charlton 1978, 1984; Santley et al. 1986). In dendritic central-place systems the primary function of the top-ranking local center is production or bulking for export, which in turn determines where lower-ranking centers and rural villages are founded and the kinds of activities conducted within them. In fact, the spatial entity that I have defined as the core of the Teotihuacan state, the Basin of Mexico and southern Hidalgo, displays most of the characteristics expected in a dendritic central-place system. Of the fourteen correlates derived for dendritic central-place systems, thirteen are represented at Teotihuacan or at settlements in its immediate sustaining area (Santley n.d.a, n.d.b).

The incomplete servicing of local areas by the industry dominating the economy of the principal urban center is another outcome of dendritic organization. Interestingly, rural villages in the Basin of Mexico were not overly reliant on implements produced at Teotihuacan. Instead, they obtained macrocores from the Pachuca mines and manufactured their own technology, or they scavenged material from Otumba that had originally been quarried much earlier (Santley et al. 1986). The urban center was therefore not a central place with reference to the production and distribution of obsidian technology to rural villages in the Teotihuacan Valley. Rather, most of the output of its obsidian workshops appears to have been destined for exchange beyond the boundaries of the Teotihuacan state. This long-distance network may have been established through the implementation of highly discriminatory pricing strategies aimed at carving out large marketing hinterlands (Santley 1980, 1984; Sanders and Santley 1983).

Sites containing enclaves of resident Teotihuacanos appear to have played key roles in the interregional system dominated by Teotihuacan. As I have pointed out, enclaves are generally situated near special or unusually diverse resource zones that contained raw materials to which Teotihuacan wanted access, or along established routes of transit (Santley 1983). Thus far, I have provisionally identified five sites of this type: Kaminaljuyu in the Valley of Guatemala (Kidder et al. 1946; Sanders and Michels 1977); Tikal in the Peten region of northern Guatemala (T. Patrick Culbert, personal communication), Tinganio and Ahual-

ulco in West Mexico (Phil C. Weigand 1974, personal communication; Piña Chan 1980), and Matacapán on the South Gulf Coast (Valenzuela 1945). El Tajin, a site I originally called an interactive node, is another possible candidate (Evelyn Ratray, personal communication).

Of these, Kaminaljuyu and Matacapán are the best documented. Kaminaljuyu, there is every reason to believe, dominated access to the El Chayal obsidian source, one of the major classes of obsidian distributed to the Maya Lowlands (Parsons and Price 1971). Matacapán, in contrast, was located in the Tuxtla Mountains, the only available source of igneous rock for grinding implements and monumental sculpture on the South Gulf Coast (Coe and Diehl 1980). Both Kaminaljuyu and Matacapán may have also acted as production nodes for goods which were subsequently channeled into long-distance exchange networks. Such was definitely the case at Kaminaljuyu where pressure blade cores were produced in great numbers (Hay n.d.), but at Matacapán there are no specialized basalt tool workshops, to judge from the survey and excavations conducted to date (Santley et al. 1984, 1985b, 1985c). The area immediately around Matacapán, however, does contain an extensive series of fine-grain marine sediments exceptionally rich in kaolinite that have been upwarped by recent volcanism. The site also contains a large-scale and internally differentiated ceramic production industry which made use of these clays. I suspect that pottery produced at Matacapán was rarely traded long distances in significant amounts. Rather, the base clay was probably the major resource exchanged (Santley and Arnold 1986).

In sum, there is considerable evidence indicating that Teotihuacan maintained close ties with centers located in many of the most densely populated regions of Mesoamerica. I believe that commercial factors were the major reason why such linkages were established and that the long-distance movement of exotic goods was controlled by a cartel of major power centers under the politico-economic aegis or influence of Teotihuacan. This interregional network apparently required the presence of resident foreigners at key nodes in the system to oversee Teotihuacan and cartel interests. Such presences consisted of small enclaves of Teotihuacanos established at centers that controlled access to special resource zones and were in a position to dominate the long-distance movement of goods. The character of the Teotihuacan presence at Matacapán, however, differs from that reported at sites in other areas of Mesoamerica.

THE TEOTIHUACAN PRESENCE AT MATACAPÁN

Matacapán is located approximately 5 km east of the modern community of San Andrés Tuxtla in the Tuxtla Mountains of southern Veracruz (Fig. 2). Research conducted to date indicates that the urban center covered an area at least 20 km² in size (Santley et al. 1984, 1985b, 1985c, 1987b). The sequence at Matacapán dates to three major time periods: the Middle Formative, the Middle Classic, and the Late Post-Classic. Middle Formative Matacapán consists of a series of small village sites separated by unoccupied zones that were probably utilized as in-

¹ Spence's estimates of the scale of the obsidian industry at Teotihuacan have recently been questioned (Clark 1986). My most recent estimates of the number of obsidian workers required based on levels of consumption of Pachuca obsidian throughout Mesoamerica at large are much less than those originally proposed by Spence but still significantly greater than Clark's (Santley and Pool n.d.). Moreover, there is reason to believe that many "workshops" at Teotihuacan actually date to the Late Classic period, not to the Middle Classic as formerly suggested.

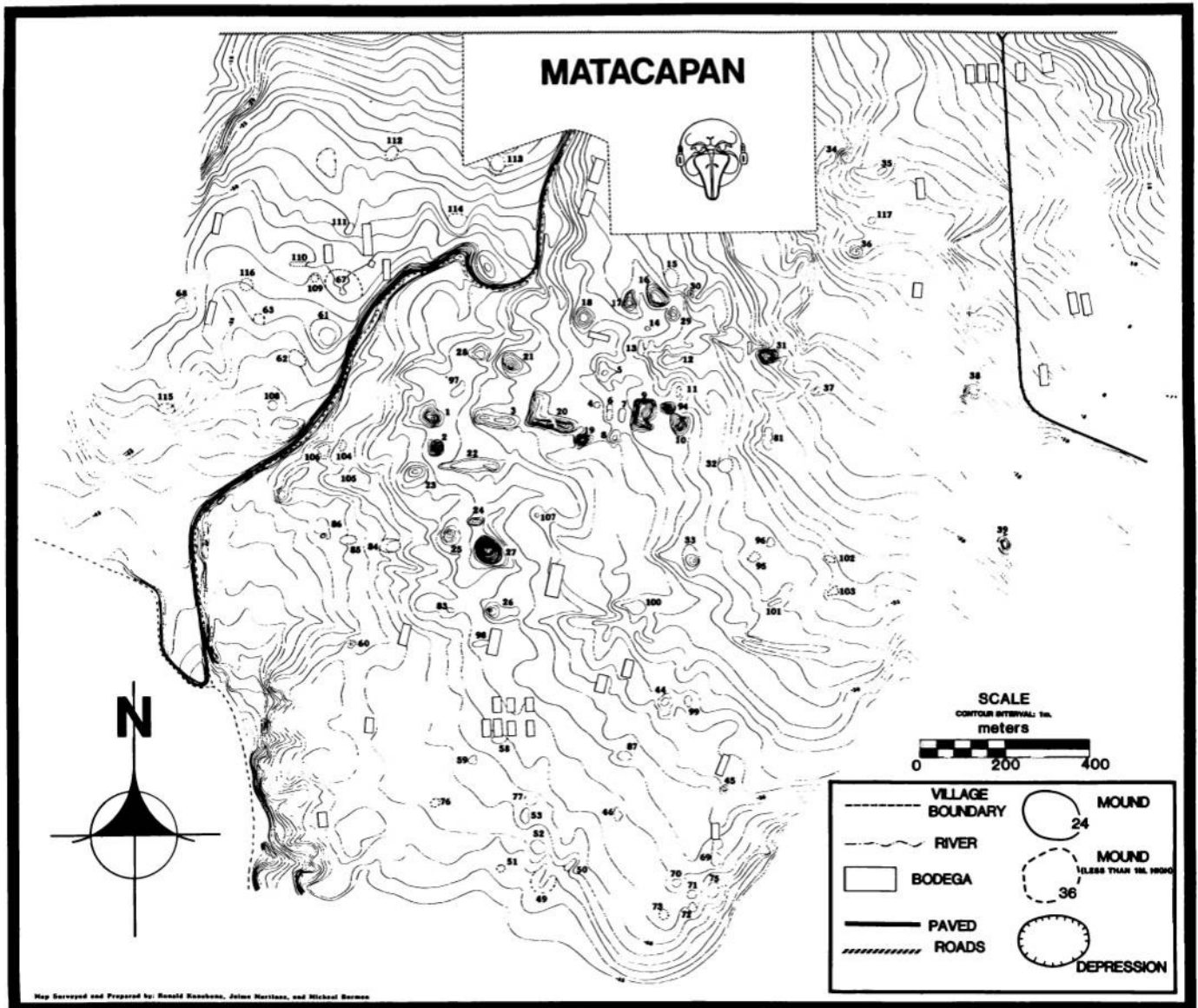


Fig. 2 Topographic map of central Matacapán.

fields. Following a massive volcanic eruption of San Martín sometime toward the end of the Middle Formative period, Matacapán lay unoccupied until the Middle Classic. Middle Classic pottery is distributed throughout the site but is most concentrated in and around the central 6 km² defined as central Matacapán. Late Classic pottery also occurs throughout Matacapán; however, refuse densities are generally scanty and the occupation more shallow, in comparison to the Middle Classic. Many of Matacapán's principal public buildings were therefore probably constructed in the Middle Classic or contain Middle Classic substructures within.

Central Matacapán is dominated by a large complex of mounded architecture distributed over 1.5 km². This complex contains sixty-two mounds, many of which are arranged around small plazuelas which in turn are situated around a large central plaza. At least two kinds of mounds are present: multistaged temple mounds and rectangular,

sometimes circular, residential platforms. At least one *talud-tablero* temple platform is known, Mound 2 (Valenzuela 1945), and the occurrence of Teotihuacan materials near the base of other platforms suggests that several other *talud-tablero* structures may be present (Santley et al. 1984, 1985c).

The civic-ceremonial district is surrounded by 4.5 km² of dense urban occupation. Within this zone occupation is literally continuous, although there is variability in surface refuse densities. High density zones represent areas of residential occupation, and each contains a small complex of mounded architecture. Low density zones, in contrast, probably supported small infields that provided basic staples and dietary supplements for the occupants of each residential district. The densely nucleated, central part of the site is surrounded by a large area of suburban occupation covering at least 14 km². Within this zone occupation densities vary greatly. The general pattern is one involving pockets of occupation covering 2–30 hectares separated by

areas with relatively little surface refuse. Donut stones and basalt hoes are common, implying that agriculture was a primary activity. Outlying residential zones also contain a large number of ceramic production areas which vary dramatically in size and internal differentiation (Santley and Arnold 1986).

Distributed throughout Matacapán is a substantial area of Teotihuacan occupation. This occupation consists of a complex of ritual-ceremonial, culinary, and various special-function artifacts that consistently co-occur in refuse middens adjacent to domestic structures and near public buildings. Much of this material consists of copies or imitations of Teotihuacan goods which date to the Tlamimilopa, Xolalpan, and Metepec phases (ca. A.D. 400–700). Our best Teotihuacan diagnostic is the cylindrical tripod vase, which was rendered primarily in Fine Buff (Imitation Copaware) but also in Fine Orange and occasionally Fine Gray. Overall, Fine Buff accounts for 6.2 percent of all Middle Classic pottery, although in certain contexts it may amount to 20–30 percent of all pottery retrieved. Most cylindrical tripod vessels were undecorated, but originally many may have been fresco-painted. These vessels have hollow rectangular supports that are more rounded and tapered than tripods from Teotihuacan (Evelyn Rattray, personal communication). The most common decorative motif found on supports consists of two intertwined incised lozenges. This same motif has been reported from Kaminaljuyu (Kidder et al. 1946), Monte Alban (Caso et al. 1967), Escuintla (Janet C. Berlo, personal communication), and at Teotihuacan (Séjourné 1966). Also represented are highly stylized Tlalocs, incised H- and I-shaped elements, and occasionally depictions of *talud-tableros*. Although most of the supports are hollow and subrectangular in shape, solid slab and hollow tubular tripods are also present.

The Middle Classic assemblage also contains a relatively large number of *candeleros*, Teotihuacanoid figurines, and other Teotihuacanoid materials. Virtually all of the Matacapán *candeleros* are either single- or double-chambered and subrectangular in form, often with finger punctate exterior decoration (Santley et al. 1985c). Other examples have smoothed exteriors with incised linear decoration. Teotihuacanoid figurines include marionettes, “princess” figurines, and other Teotihuacan types. Although the faces and headdresses of many types resemble those from Teotihuacan, the Matacapán figurines are generally larger and their eye treatment is different, suggesting local manufacture (W. Barbour, personal communication).

Also present are *braseros*, several with anthropomorphic supports, *incensarios*, adornos, effigy vessels, rectangular seal stamps, metates with *talud-tablero* tripod supports, sculpture with representations of deities Tlaloc and Huehuetotl, and *floreros*, all of which were rendered in Teotihuacan style, as well as a few sherds of Thin Orange (Kolb 1973; Muller 1978; Santley et al. 1985b, 1985c; Séjourné 1966). There are also great numbers of globular everted-lip utility jars which resemble types popular in the Basin of Mexico during the latter part of the Middle Horizon and Phase One of the First Intermediate (Sanders et al. 1979: figs. C.14, C.18).

Matacapán is one of the few sites in Mesoamerica with architecture that is Teotihuacan in design. The one structure that Valenzuela (1945) exposed completely, Mound 2, was built in typical Teotihuacan style, with two tiers of *talud-tablero* construction, a frontal stairway flanked by balustrades, and a clay-surfaced exterior covered with red paint. Mound 2 is paired with Mound 1, a structure of comparable size with Teotihuacan materials at the base, suggesting that both were constructed using the same *talud-tablero* format (Santley et al. 1984). These buildings, together with Mounds 3 and 22, collectively define a group of structures termed the Teotihuacan Barrio. Originally, it appeared that the complex of Teotihuacan style material was confined mainly to the Teotihuacan Barrio. Valenzuela's (1945) excavations uncovered Teotihuacan materials near Mounds 2 and 3, but nowhere else at Matacapán. More recent excavations by Ponciano Ortiz (n.d.) near Mound 9 also did not encounter Teotihuacan materials. Our work in 1982 supported this viewpoint: Teotihuacan materials were not present on the surface in central Matacapán, nor did they occur in the three excavations we conducted outside the barrio (Santley et al. 1984).

Subsequent research has greatly altered this point of view (Santley et al. 1985b, 1985c, 1987b). It now appears that the same complex of Teotihuacan artifacts is present in almost every excavation undertaken to date in central Matacapán. Those few excavations that failed to uncover Teotihuacan materials were located either in Late Classic deposits or in plaza areas where densities of all classes of refuse were extremely sparse. Teotihuacan materials, then, occur not only in the area that we originally defined as the Teotihuacan Barrio but also throughout the large area of residential occupation several hundred meters to the west of the barrio, in the large ceramic production zone in the southern part of the site, and in areas of suburban occupation as well.

In addition, Teotihuacan style residential buildings may also be present. The architecture in Mound 61, for example, consisted of a complex of domestic structures, with room groups (apartments?) arranged around patios and separated from one another by intervening corridors, as at Teotihuacan (Millon 1973). The burial pattern involved the flexed interment of the deceased below house floors within the structure, a Teotihuacan practice (Sanders et al. 1982; Serrano and Lagunas 1974; Spence n.d.a). Represented in the sample are individuals of both sexes and all ages, including perinatals interred in vessels, another Teotihuacan mortuary custom. Grave goods found with adults included a large number of cylindrical tripod vessels with supports decorated in typical Teotihuacan style.

The evidence at hand suggests that Matacapán supported an enclave occupied by immigrant Teotihuacanos and their descendants (Fig. 3). Most of the materials that are Teotihuacan related are objects that appear to have had a ritual-ceremonial function (e.g., figurines, *candeleros*, *incensarios*, seal stamps, cylindrical tripod vases) or a role in food preparation and consumption (e.g., *braseros*, cream pitchers). Two levels of Teotihuacan-inspired ritual-ceremonial activity are represented at Matacapán (Santley et al. n.d.). *Talud-tablero* architecture and *incensarios* are present in pub-

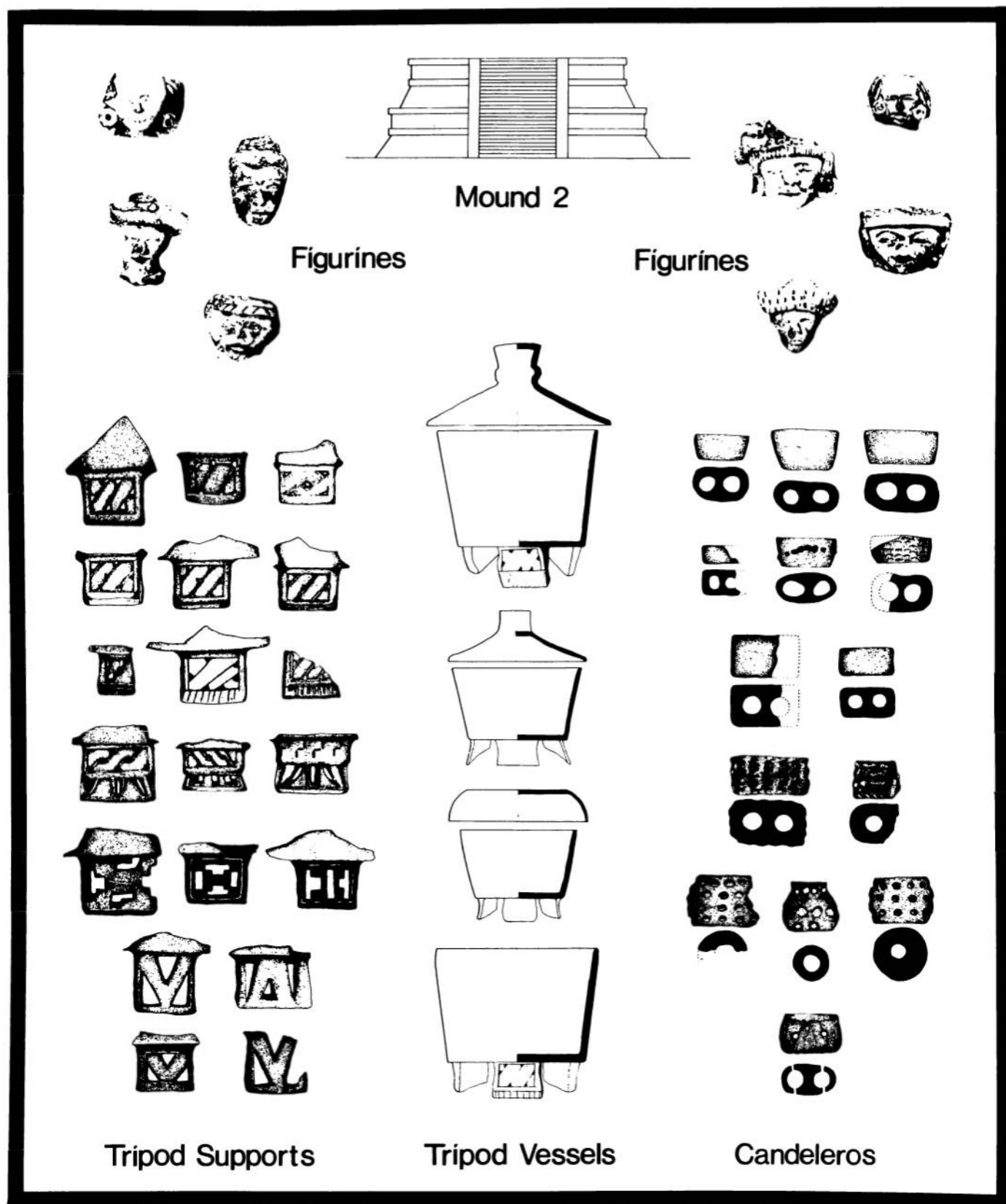


Fig. 3 Teotihuacan style materials from Matacapan.

lic contexts, implying a function that involved integration of the populace at large. On the other hand, *candeleros*, figurines, cylindrical tripod vases, and seal stamps generally occur in private contexts along with domestic refuse, suggesting a role in family or household ritual. These ceremonials also involved the burial of the dead in typical Central Mexican fashion, often with locally made copies of Teotihuacan ceramics as grave goods.

This patterning agrees with evidence reported in the ethnographic literature which indicates that enclave identity was almost always expressed as a ritual ideology (Barth 1969; A. Cohen 1969; R. Cohen and Middleton 1970). In enclaves, ritual ideology involves a collection of ceremonials—some enclave-wide, others familial—which reinforce group ethnicity (Santley et al. n.d.). Enclave lifestyles and ritual ideologies also tend to differ from those in homelands for reasons other than cultural borrowing. These differences are primarily a function of the need to express essential elements of macrogroup identity at the expense of regional variations in order to maximize political cohesion. This homogenization of behavior, as Abner Cohen (1969) puts it, may explain why the assemblages from Matacapán and Teotihuacan are not stylistically identical.

The Teotihuacan presence at Matacapán was established rapidly sometime during the Late Tlamimilolpa or Early Xolalpan Phase (ca. A.D. 400–550). The Teotihuacan Barrio was apparently the first area to be occupied. Later, a large zone of dense urban occupation rich in Teotihuacan style materials was founded around the barrio and main zone of public architecture. Thus the character of the Teotihuacan presence at Matacapán contrasts sharply with that at Kaminaljuyu where the Teotihuacanoid occupation was confined mainly to the Palangana and the Mound A-B complex (Kidder et al. 1946; Cheek 1977). At Kaminaljuyu, Teotihuacan household ritual paraphernalia (e.g., *candeleros*, figurines, seal stamps, and representations of the deity Huehue-teotl) are extremely rare. Moreover, persons were interred in Mounds A and B in typical Maya fashion, not under courtyard altars and house floors as at Teotihuacan and Matacapán. Consequently, Matacapán did not contain a small compact barrio of resident foreign males who served only a commercial function, as Sanders (1977) has suggested for Kaminaljuyu. Rather, the site may have been physically conquered by Teotihuacan who subsequently colonized the region.

I doubt that this manifestation represents a generalized indigenous cultural complex unrelated to Teotihuacan that was widely distributed throughout the Tuxtla Mountains and South Gulf Coast in the Middle Classic. I warrant this assertion with the following evidence. First, although Teotihuacanoid materials do occur at Cerro de las Mesas (Drucker 1943a; Stark and Heller n.d.), Tres Zapotes (Drucker 1943b; Weiant 1943), and Laguna de los Cerros (Santley, unpublished data), only at Matacapán is there sufficient evidence to suggest a strong Teotihuacan presence. Second, the assemblage of Teotihuacan style diagnostics at Matacapán is extremely varied. *Talud-tablero* architecture is present, and the Teotihuacanoid artifacts that occur are precisely the kinds one would expect if the site con-

tained a substantial foreign element. This is not the case at other South Gulf Coast sites which lack *talud-tablero* architecture and generally do not contain more than a few Teotihuacan style artifacts.

Linguistic evidence also suggests a Central Mexican intrusion. Nahuatl was the language spoken in the western Tuxtla at the time of the Spanish Conquest. Luckenbach and Levy's (1980) glottochronological analysis indicates that the spread of Nahuatl to the South Gulf Coast and southern Mesoamerica correlated with the Pipil migrations sometime not long after the fall of Teotihuacan. If a tongue similar to Nahuatl was the language spoken in Central Mexico during the Middle Classic (see M. Smith 1984 for an alternative view), then the arrival of Nahuatl speakers may represent a migration that followed linkages with the South Gulf Coast originally established at the beginning of the Middle Classic. Alternatively, it is possible that the migration actually took place several centuries earlier than Luckenbach and Levy suggest, but that linguistic divergence occurred only after contacts with Central Mexico were broken at the end of the Middle Classic.

Finally, John Molloy (n.d.a., n.d.b) has found evidence recorded in native ethnohistories of a pan-Mesoamerican polity headed by Teotihuacan in the Middle Classic. According to Molloy, the imperial structure involved a series of top-ranking colleagues who before accession were the paramounts of local dynastic or republican centers. In the Middle Classic three of these colleagues sat at Teotihuacan, one at Teoculhuacan, and one at a place called Nonoalco on the South Gulf Coast which Molloy has tentatively identified as Matacapán. Admittedly, Molloy's ideas are quite controversial, but they are not contradicted by the evidence from Matacapán as it now stands.

THE OBSIDIAN PRODUCTION-DISTRIBUTION SYSTEM AT MATACAPÁN

All of the obsidian present at Matacapán and other sites on the South Gulf Coast had to be obtained through long-distance exchange. As discussed above, obsidian was traded from Teotihuacan or centers with strong Teotihuacan connections in the Middle Classic. To produce obsidian tools requires a subtractive technology involving the removal of masses of material. Thus, aspects of production-distribution structure can be defined through the analysis of the kinds of tools and associated debitage found in different archaeological contexts.

Classic Period Source Utilization and Long-Distance Exchange

Obsidian may be exchanged in a variety of different forms (Fig. 4). Because obsidian is a brittle substance, the most cost-effective way to transport blades is as prepared pressure cores from which blades have not yet been removed. The exchange of pressure cores minimizes the amount of damage that tools experience in transit while maximizing the volume of usable tools that may be obtained from a core of standard mass. Obsidian may also be exchanged as prismatic blades; however, exchange in blade form is a less cost-effective trading strategy as far as con-

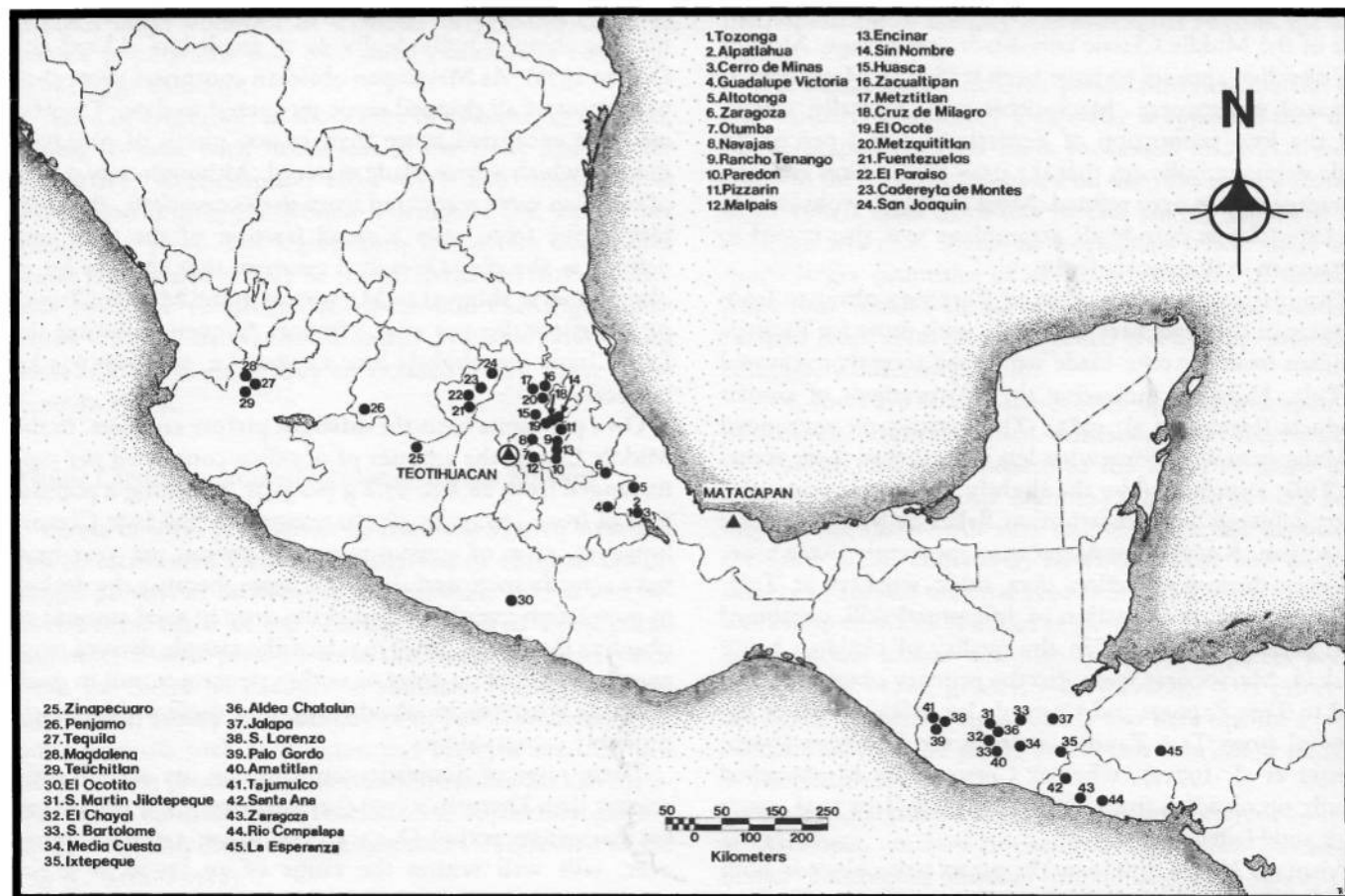


Fig. 4 Mesoamerica showing major obsidian sources.

sumers are concerned because blades must be individually packaged or wrapped in small lots to minimize edge damage or bag wear which can render blades unusable. Obsidian may also be traded in raw form as nodules or relatively unworked blocks of material or as partly processed macrocores. Distribution as nodules or blocks is an even less efficient trading strategy because the core must be prepared after shipment but before blades can be removed. Moreover, the raw material may contain inclusions or internal flow planes which can render nodule or block useless for blade manufacture. Consequently, obsidian is generally first tested at the source before removal to workshops or exchange networks.

The relative amount of different kinds of reduction debitage exhibited in archaeological assemblages provides information about the form in which obsidian was exchanged (Sheets 1975, 1978; Healan et al. 1983; Clark and Lee 1984; Santley et al. 1984). Assemblages containing exhausted pressure cores, blades or flakes exhibiting reduction errors produced during blade removal, great numbers of prismatic blades, and very little primary or secondary core preparation debitage will occur when pressure blade cores were the primary object distributed. On the other hand, if exchange involved the distribution of finished tools, then the assemblage should be dominated by prismatic blades, and little reduction debitage and few exhausted pressure cores should be present. Centers receiving

relatively unmodified raw material should contain assemblages with relatively large amounts of macrodebitage and debitage from secondary core preparation and reduction errors. The exchange of macrocores should create assemblages containing some macrodebitage and decortication flakes; greater amounts of small percussion blades, platform faceting flakes, and other secondary core preparation debitage; and pieces with reduction errors incurred during blade removal. The range and relative amount of different kinds of debitage produced by systems exchanging different kinds of obsidian products can be established by experimental replication. Deviations from standards established by replication indicate either a mix of different products exchanged or a lack of isomorphism in array of reduction techniques used to produce the archaeological and replicated assemblages.

Obsidian from three groups of sources is present at Maticapan: green obsidian from the complex of sources near Pachuca, Hidalgo, in Central Mexico; a gray-black obsidian with internal banding that came from Zaragoza and Oyameles in central Veracruz; and a translucent gray, often almost clear obsidian that was obtained from Pico de Orizaba and Guadalupe Victoria in south central Veracruz (Pool and Santley, unpublished data). No material from Otumba in the Teotihuacan Valley, West Mexico, or Guatemala occurs in the sample tested by x-ray fluorescence, though some might be present in the total collection in

nominal amounts. Zaragoza obsidian accounts for 90 percent of the Middle Classic core-blade assemblage. Most of this obsidian appears to have been traded to Matacapán as prepared macrocores. Macrodebitage is virtually absent, and the low proportion of decortication and percussion blade debitage indicates that the gray macrocores entering Matacapán were very refined. Most of the gray obsidian in the Late Classic core-blade assemblage was also traded to Matacapán in macrocore form.

Cumulative frequency plots of Zaragoza obsidian from Matacapán compare very favorably with those for Pachuca obsidian from the core-blade workshop recently excavated in Tula, Hidalgo, indicating the procurement of similar products (Healan et al. 1983). The macrocores exchanged to Matacapán were somewhat less refined than those entering Tula, as indicated by the slightly greater proportion of macrodebitage and decortication flakes at Middle Classic Matacapán. Knappers at Matacapán apparently made more mistakes during reduction than lithic workers at Tula. This, I suspect, is a function of differential skill, combined with perhaps variability in the quality of obsidian being worked. Macrocores were also the primary objects distributed to Tres Zapotes and Cerro de las Mesas. Most of the material from Tres Zapotes is from the Zaragoza source (Hester et al. 1971a), whereas Cerro de las Mesas relied heavily on obsidian from Cerro de Minas (Jack et al. 1972; Stark and Heller, n.d.).

Prismatic blades dominate the green assemblage in both the Middle Classic and the Late Classic. A few platform faceting flakes, percussion blades, initial series blades, and reduction errors are present, but nowhere in the frequencies that one would expect if green obsidian was traded in nodule, macrocore, or pressure core form. This suggests that most green obsidian entered the Tuxtlas as prismatic blades. Pachuca obsidian accounts for 6 percent of the Middle Classic assemblage, indicating that the Teotihuacan presence at Matacapán relied heavily on production-distribution systems not based in Central Mexico. The Late Classic occupation utilized more green obsidian, though material from Zaragoza is still predominant. Overall, Pachuca obsidian accounts for 10 percent of the Late Classic assemblage, but occasionally it may be as high as 40 percent.

The assemblage of obsidian from south central Veracruz sources contains no macrodebitage or decortication flakes, and platform faceting flakes amount to only 0.7 percent of all Middle Classic material. Small percussion blades, irregular blades, and reduction errors such as ridge blades, plunging blades, and core rimming/facing flakes, however, do occur, suggesting distribution as fully prepared pressure cores almost ready for blade removal. The Late Classic assemblage, in contrast, is almost entirely composed of fine prismatic and irregular prismatic pressure blades. This implies that most Pico de Orizaba obsidian entered Matacapán in blade form in the Late Classic.

The manner in which goods are traded is closely linked to the volume of material distributed across space. High volume exchange systems generally require efficient transportation networks with goods packaged in large quanti-

ties or in bulk form, whereas in low volume systems goods may be shipped individually or in small lots (Lloyd and Dicken 1972). At Matacapán obsidian comprises more than 95 percent of all chipped stone recovered to date. Thus far we have excavated more than 17,000 pieces of obsidian, most of which is core-blade material. Although only 9.8 kg of obsidian were recovered from the excavations, the samples derive from only a small fraction of the total area defined as the site. Overall, I estimate that 196,000 kg of obsidian were shipped to Matacapán in the Middle Classic, or about 978 kg per year.² Import frequency during the Late Classic was slightly less: 127,000 kg, or about 635 kg per year.

On a per capita basis the different picture emerges. In the Middle Classic the amount of obsidian consumed per capita ranged from 26.8 to 97.8 g per year, assuming a population of from 10,000 to 36,500 persons. In the Late Classic, however, rates of consumption per person per year may have actually increased about 2.6 times, because the decline in population greatly exceeded the drop in total amount of obsidian imported. Since much of the sample derives from excavations in plaza areas or within structures, not in trash middens where more obsidian occurs, these estimates are probably conservative.

These rates of domestic consumption are significantly greater than Drennan's (1984) estimate of 1.1 g per person for Formative period Oaxaca. The lower estimate, however, falls well within the range of 19.52–30.58 g per person per year that we have recently computed for Teotihuacan and rural Classic period sites in the Basin of Mexico (Santley et al. 1985a). Although all of the Tuxtlas region has yet to be systematically surveyed, preliminary reconnaissance indicates a substantial Classic period occupation at least ten times the size of that reported at Matacapán. The density of obsidian at other large Classic period centers such as Tres Zapotes, Matalapan, Matacanela, El Picayo, and Laguna de los Cerros is also very similar to that at Matacapán (Santley, unpublished data). The same may be said for small rural villages and hamlets beyond the main areas of urban occupation (Santley et al. 1987a) as well as major centers outside the Tuxtlas such as Cerro de las Mesas (Stark and Heller n.d.). This suggests that at least 8–10 metric tons of obsidian entered the Tuxtlas annually. The total amount of obsidian traded to the entire South Gulf Coast was probably minimally another magnitude of order higher.

Substantial quantities of obsidian were therefore distributed to the Tuxtlas region in the Classic period. Most of this obsidian was exchanged as refined macrocores that were almost ready for blade removal, but minor amounts of prismatic blades and fully prepared pressure cores were also traded. The primary distribution network to which Matacapán was attached therefore emphasized the trans-

² Rates of consumption at Matacapán are based on the volume of obsidian present in excavations, with extrapolations for the site based on percentage of site excavated, percentage of area occupied by structures and middens, depth of deposit, and length of occupation. Also, only material from the 1983 and 1984 seasons was weighed. A complete discussion of the methods involved in these estimates is presented in Santley et al. 1985a.

port of large volumes of material in preform form to service populations that consumed obsidian in comparatively large amounts.

Rates of utilization in the Valley of Oaxaca, in contrast, appear to have been much less in the Early and Middle Formative. Consumption rates were also much less at Maticapan during the Middle Formative (ca. 12.3 g per person per year). The significantly lower rate of obsidian use in the Formative may be related to the fact that distribution involved reciprocal down-the-line exchange, combined with the utilization of locally available lithic media such as chert in the Valley of Oaxaca (Parry 1983; Pires-Ferreira 1975).

Middle Classic Production-Distribution System Structure

Facets of local production-distribution system structure can be established through the analysis of obsidian assemblages present in different spatial contexts within and between sites. Most of the obsidian utilized at Teotihuacan and other Classic period sites in the Basin of Mexico came from the Sierra de Pachuca in southern Hidalgo (Spence 1981, 1984; Storey n.d.; Santley et al. 1986). Material from other deposits such as Paredon and Pizzarin was also utilized, but the production-distribution system for this material, while controlled by Teotihuacan, apparently did not involve the shipment of large quantities of obsidian to the city (Charlton 1978).

Although the collections from workshops at Teotihuacan have yet to be examined technologically to determine the reduction sequences that took place (Michael Spence, personal communication), the kinds of debitage present at source localities such as Cerro de Navajas suggest that most heavy percussion work occurred at the mines and that the prepared macrocore was the primary object exported from source regions containing vein or block obsidian (Cobean and Vogt n.d.; Charlton and Spence, 1982; Spence and Parsons 1972). In contrast, gray obsidian from the local Otumba source entered Teotihuacan either as cobbles or in crudely processed nodular form. Most of the workshops defined by Spence (1981, 1984) occur in downtown Teotihuacan, and apparently many were highly specialized, manufacturing only particular kinds of implements.

According to Spence (1981), most of the inhabitants of the city obtained their obsidian technology from cores prepared and/or reduced in workshops. This was certainly the case at Tlajinga 33 which obtained completely prepared polyhedral cores or blades from the city's workshops (Storey n.d.). However, rural sites in the Teotihuacan Valley such as Maquixco Bajo, Mixcuyo, Tenango, and Tlatenco received both macrocores and coarsely shaped blocks of obsidian, not fully prepared cores or finished blades (Santley et al. 1986). Consequently, it would appear that, while some of the city's population was probably dependent on cores, blades, and other tools produced in special workshops at Teotihuacan (e.g., elites, priests, and state personnel), most of the population of the Teotihuacan Valley manufactured its own obsidian technology. Workshop production in the urban zone was therefore probably geared mainly for use by

the population of the city and for export beyond the local region.

Was Maticapan's obsidian production-distribution system similarly organized? Originally it appeared that most of Maticapan received tools processed in special workshops in the civic center, based on the 1982 survey (Santley et al. 1984). Data from this surface survey indicated that debitage was rare, except in workshops where there were much larger quantities of obsidian. Analysis of materials from four seasons of survey and excavations, including samples from areas formerly called workshops, indicates a completely different picture.

First, there are no obsidian workshops at Maticapan. All of the areas originally called workshops are concentrations of obsidian that accumulated as the result of slope wash from mounds and other features. Obsidian is very common on the surface but very rare in subsurface deposits in the same areas. Moreover, nowhere at the site does the density of surface material approach that known to exist in workshop middens (Healan et al. 1983; Shafer and Hester 1983). While surface densities as high as 7 pieces per m² occasionally occur, generally they average 0.03 pieces per m². Both figures are significantly less than Spence's (1981) estimate of 100–500 pieces per m² for workshop middens at Teotihuacan.

In addition, surface assemblages from different contexts at Maticapan are very similar in composition.³ All assemblages of Zaragoza obsidian contain large numbers of prismatic blades and some debitage produced during core preparation and blade removal (Fig. 5). This patterning is precisely what one would expect if all parts of Maticapan received macrocores which were subsequently reduced. The assemblages from central Maticapan and the surrounding suburbs, however, are slightly different. Prismatic blades are more common in central Maticapan, while suburban areas contain more percussion blades and irregular pressure blades, implying that different parts of the site received cores in various states of refinement. Statistical analyses suggest that this was probably not the case. Rather, it appears that percussion blades and irregular prismatic struck off cores in central Maticapan were sometimes distributed to areas of outlying occupation.

Data from eleven groups of excavations support this reconstruction. Each Zaragoza assemblage contains large numbers of prismatic blades as well as secondary core reduction debitage, error recoveries, exhausted cores, and obsidian shatter. Blade core reduction, then, was a generalized activity that took place in all Middle Classic contexts at Maticapan; it occurred in elite and commoner households, civic-ceremonial and ceramic workshop contexts, as well as in both central Maticapan and its immediate suburbs. Although obsidian from Pachuca, Pico de Orizaba, and Guadalupe Victoria entered Maticapan as prismatic blades and polyhedral cores, again there is little variability from one part of the site to the next.

On the other hand, the quantity of obsidian present and

³ The Kolmogorov-Smirnov test was used to test differences between all pairs of samples. Significance level was allowed to vary with sample size, beginning at < 0.05.

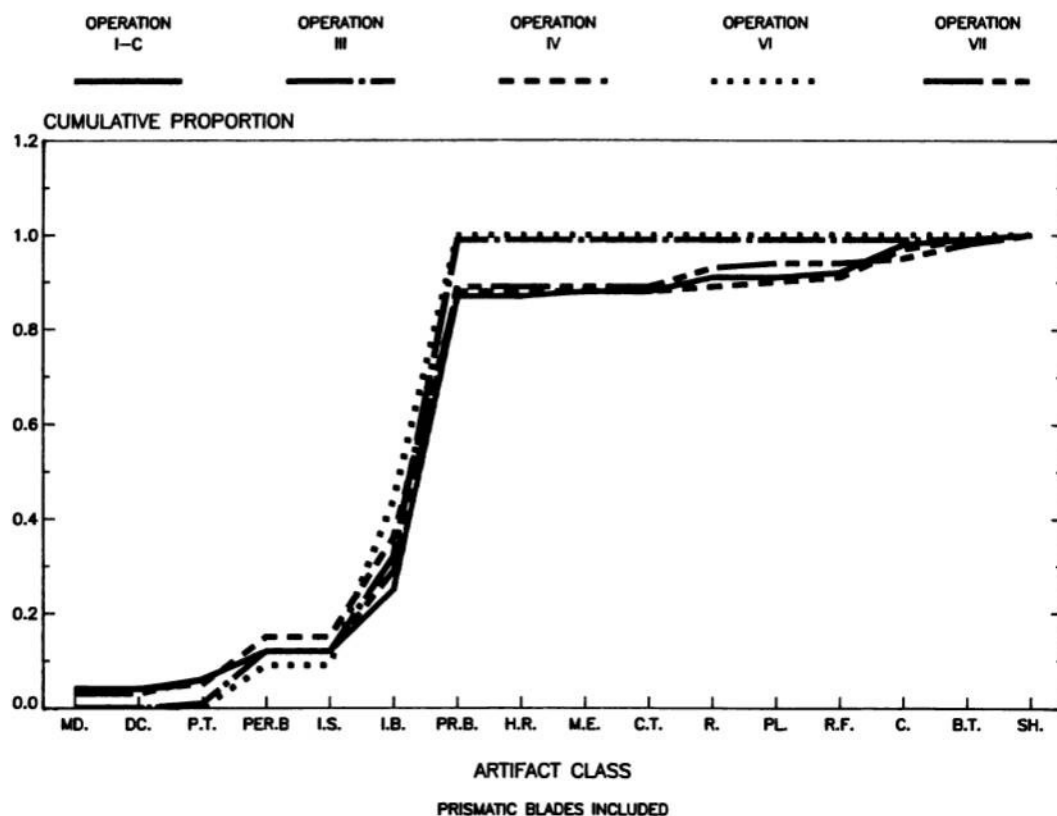


Fig. 5 Cumulative frequency graph of Zaragoza obsidian from different Middle Classic contexts at Maticapan.

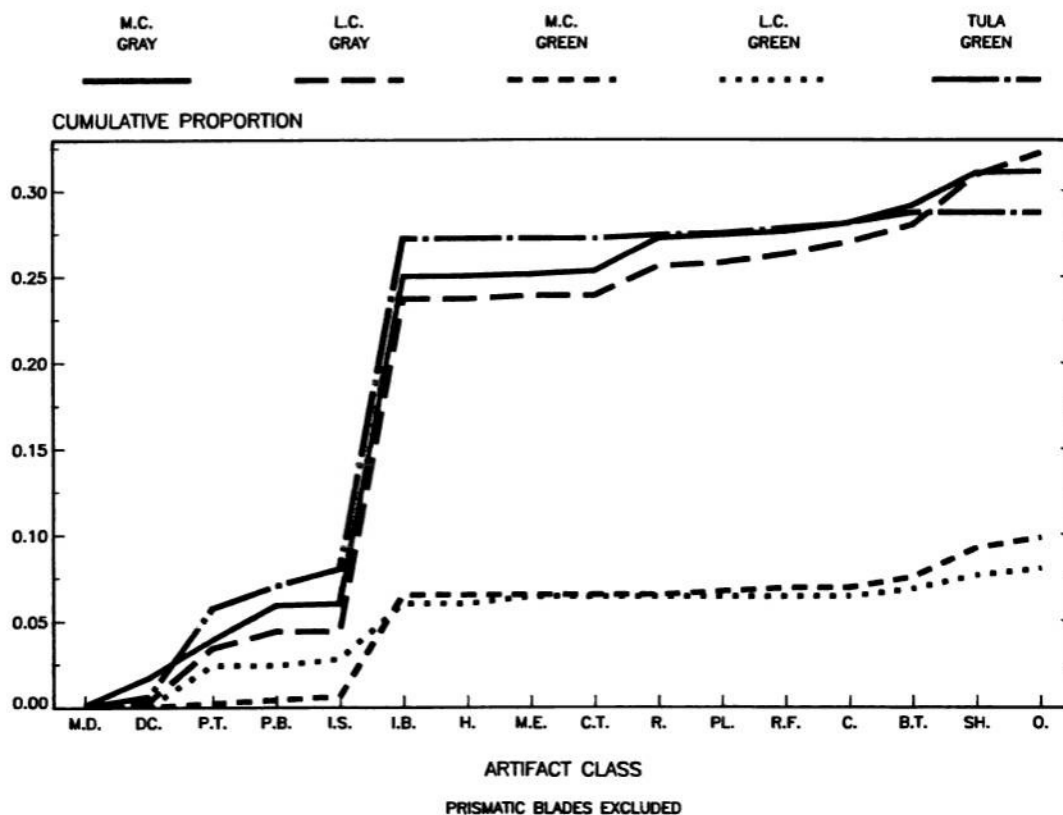


Fig. 6 Cumulative frequency graph of Zaragoza and Pachuca obsidian from Middle and Late Classic contexts at Maticapan.

the degree of source reliance do vary in different contexts. Obsidian, both from Zaragoza and from Pachuca, is the most common in the main civic-ceremonial complex in central Matcacapan. Here, the density of core-blade material averages 0.06 pieces per m². Most of this material is gray; however, green obsidian accounts for 13 percent of all lithics retrieved, and near Mound 18 green obsidian amounts to more than 40 percent of the assemblage. In the zone of dense occupation surrounding the civic center densities of core-blade material average 0.025 pieces per m², per square, and only about 5 percent of the assemblage is green. In suburban Matcacapan the density of core-blade material is even less: about 0.007 pieces per m², of which only 1 percent is green. In the area of urban and suburban occupation around Matcacapan's civic center, the amount of obsidian present covaries with the density of ceramics ($r = 0.88$, $df = 4401$, $p < .001$), suggesting that much of the variability present is the result of differences in refuse density.

In the civic center, on the other hand, the frequency of obsidian is unrelated to the density of surface ceramics ($r = 0.36$, $df = 1051$, $p < .001$). The high status of the residents of "downtown" Matcacapan may explain this increase in the incidence of obsidian. The same may be said for the proportionately greater amount of material from the Pachuca source. Interestingly, prismatic blades from the center of Matcacapan exhibit less utilization than blades from outlying areas of lower status occupation, indicating that elites were more affluent consumers of obsidian. In other words, blades were discarded before their edges had completely dulled, which increased the rate at which obsidian accumulated in nearby middens.

To recapitulate, there is evidence suggesting that aspects of Matcacapan's obsidian production-distribution system were similar to Teotihuacan's. Both sites received macrocores from which blades were removed and which were used at more or less the same rates per year. The production-distribution systems, however, differed in three important respects. For one, there were no obsidian workshops at Matcacapan. Therefore, Matcacapan's obsidian production-distribution system was oriented primarily to local consumers, though material routed to other regions may have passed through the site. Second, almost all of the obsidian that entered rural Teotihuacan sites in the Basin of Mexico was in macrocore form, whereas the long-distance exchange system through which Matcacapan obtained its obsidian emphasized a variety of products, including macrocores, polyhedral cores, as well as prismatic blades. Finally, many green obsidian blades at Matcacapan have ground platforms. Platform grinding does not occur at Teotihuacan in the Middle Classic (Michael Spence, personal communication), indicating that cores of Pachuca obsidian were sent to another site where the core platforms were ground before shipment to the Tuxtlas.

Late Classic Production-Distribution System Structure

The Late Classic period postdates the episode of Teotihuacan influence in the Tuxtlas. Teotihuacan diagnostics such as cylindrical tripod vases, figurines, *incensarios*, and

candeleros are no longer present. In the Late Classic Matcacapan experienced considerable population loss, and that population was distributed in a much more dispersed fashion throughout the occupation zone. At most, I estimate that the area littered with Late Classic refuse was about one-fourth of that present earlier, but the total amount of population loss may have been as great as 90 percent.

Considering that a substantial Teotihuacan presence was no longer resident at Matcacapan, what impact, if any, did this event have on the structure of the obsidian production-distribution system? First, there appear to be some changes in source utilization. Although Zaragoza obsidian still predominates, Pachuca obsidian now accounts for more than 10 percent of all material imported (Fig. 6). Virtually all of the Late Classic green obsidian was distributed to Matcacapan in prismatic blade form, as during the Middle Classic. Pachuca obsidian was also exchanged to Tres Zapotes and Cerro de las Mesas as prismatic blades, many of which have ground platforms (Stark and Heller, n.d.; Santley, unpublished data). Unfortunately, the surface samples from Tres Zapotes and Cerro de las Mesas cannot be dated with certainty, though a Classic date does seem likely.

Second, there was an increase in the rate at which obsidian was used in domestic contexts. As we have seen, although about one-fourth of the site was occupied in the Late Classic, the total amount of obsidian traded to Matcacapan dropped only about 35 percent. The rate at which obsidian was used therefore rose to 69.6–253.9 g per capita. Levels of obsidian consumption also rose in the Basin of Mexico in Late Classic and Early Post-Classic times (Santley et al. 1985b) when local populations were much more dependent on material produced by urban specialists (Healan et al. 1983; Santley et al. 1985b, 1986). Similar events also took place among the Post-Classic Maya (Sidrys 1976).

Third, there is little variability in Late Classic assemblage content. All assemblages of Zaragoza obsidian were dominated by prismatic blades, and most also contained core preparation debitage, error recoveries, but very little macrodebitage, indicating the reduction of prepared macrocores. Samples from elite residences contained primarily blades, while collections from nonelite areas produced most of the debitage indicative of core reduction. Pachuca obsidian was also much more common in higher status contexts. Thus, while most of the Late Classic site still continued to obtain obsidian in macrocore form, local elites received mainly prismatic blades which came from sources that were not as heavily relied on by the remainder of the population.

The withdrawal of the Teotihuacan presence, therefore, had very little effect on the form in which obsidian was circulated long distances and on patterns of distribution within Matcacapan. Obsidian was still distributed in large quantities. Zaragoza obsidian, the primary source relied on, was always imported to Matcacapan in macrocore form, and macrocore reduction was a generalized activity that occurred in nearly all contexts regardless of time period. On the other hand, Pachuca and Pico de Orizaba obsidian were generally exchanged as prismatic blades. The fre-

quency of blade exchange doubled over Middle Classic levels, and there was an increase in rates of usage by the population at large, particularly for Pachuca obsidian but also for other obsidians as well. This suggests that the long-distance exchange system that emerged in Teotihuacan's wake was a more efficient distributor of obsidian.

OBSIDIAN EXCHANGE AND TEOTIHUACAN INFLUENCE ON THE SOUTH GULF COAST

Teotihuacan's decision to establish an enclave at Matcacapan was probably based on a number of factors. First and foremost, the Tuxtlas occupy a strategic location. The region is situated midway between the Gulf Coast on the one hand and the Rio Papaloapan and Rio Coatzacoalcos on the other. A base in the Tuxtlas would thus have afforded Teotihuacan easy access to the surrounding Gulf Coast plain, to trade routes up and down the coast, as well as to major arteries of riverine traffic into the interior.

The Tuxtlas are also a special resource zone. The region contains marine clays rich in kaolin, as well as deposits of salt, cinnabar, and igneous rock which were exploited in the Classic period (Santley and Arnold 1986; Santley et al. 1987a), and the area is (or was in the recent past) a center of cacao, cotton, and tobacco production. Although some of these resources also occur in neighboring regions (Stark 1978), nowhere is resource variety as great as in the Tuxtlas. In short, control of the Tuxtlas would have provided the Teotihuacan presence with the greatest possible number of qualitatively different resources that could be readily moved to foreign consumers up and down the Gulf Coast proper or to populations in the interior.

In addition, the South Gulf Coast was a major consumer of obsidian which was relied on for almost all chipped stone technology. Because suitable alternative materials such as chert and jasper are lacking, obsidian had to be obtained via long-distance exchange. These long-distance exchange networks had considerable antiquity. In the Early Formative period, for example, the Olmec obtained goods from all over Mesoamerica (Bernal 1969; Cobean et al. 1971; Soustelle 1984). While the incidence of long-distance exchange in Formative times has been greatly exaggerated (Drennan 1984), the volume of goods imported rose steadily as population levels increased (Santley et al. 1985a). Older exchange systems were thus rendered obsolete as demand eclipsed the capacity of the network to supply goods. Teotihuacan, I believe, responded to this situation by establishing a base in the Tuxtlas which was connected to production centers near the obsidian deposits in central Veracruz.

I also suspect that Teotihuacan physically managed distribution itself, providing goods in large lots and insuring that deliveries were made. Much of this material was undoubtedly shipped overland, although the possibility of transport by canoe should not be discounted. At the time of the Spanish Conquest *pochteca* trade on the South Gulf Coast was organized quite similarly. The *pochteca* dealt primarily in luxury goods, but there was also a lot of trafficking in such utilitarian goods as salt and obsidian (Bittman and Sullivan 1978). Because trade with the South

Gulf Coast was so extensive, a permanent base was set up in the town of Tochtepec (Hassig 1985). Goods were moved in large caravans which included hundreds, sometimes thousands, of burden bearers overseen by professional merchants and their agents (Berdan 1982). Burden bearers transporting goods within roughly a day's walk from production and marketing centers carried relatively heavy loads (ca. 36–45 kg). Long-distance distribution systems, in contrast, emphasized speed, and this necessitated the shipment of goods in smaller lots weighing about 23 kg each (Sanders and Santley 1983).

The total amount of obsidian distributed through the system is difficult to estimate with certainty. Earlier I suggested that the Middle Classic occupation at Matcacapan consumed about 978 kg of obsidian annually and that the total amount of obsidian entering the Tuxtlas region was probably on the order of 8 to 10 metric tons per year. If loads comparable to those reported in ethnohistoric documents were hauled in the Middle Classic, then the total amount of obsidian traded annually to the Tuxtlas would have required a caravan containing 348–435 burden bearers. The total imported to the region that Bernal (1969) calls the "Olmec Metropolitan Area" would have demanded at least seven caravans of similar size each year, while the total distributed to the entire South Gulf Coast would have been even higher still. Inclusion of other goods would raise these figures further. Admittedly, there is large room for error in these calculations, but it is not the absolute quantity of goods traded that is important here, but rather the order of magnitude.

In contrast, much less obsidian was traded to populations that had alternative sources of raw material such as chert (Sidrys 1976; Tourtellot 1978). At Tikal, for example, only about 10 percent of all lithic material from Intermediate Size and Small Size Structures was obsidian, workshop samples excluded (Moholy-Nagy 1976). Data from other sites also show that obsidian was common only in the downtown section of major urban centers and that the occupants of house mounds in rural areas had only very limited access to obsidian and probably to other exotic goods as well (Willey 1972; Andresen 1983; Sidrys 1983; Rice 1984). I estimate that the average Maya domestic group used only about 0.96–1.93 g of obsidian per year.⁴ Application of these estimates to the entire Peten indicates an annual consumption level of about 243–489 kg, while extrapolations for all of the Maya Lowlands are only about another order of magnitude higher.⁵ Thus the total amount

⁴ At Tikal I estimate that each household discarded about 3,254–6,508 pieces of chipped stone every 250 years, of which about one-tenth was obsidian, based on data presented by Moholy-Nagy (1976). My analysis also assumes that the excavated assemblages account for only about 5–10 percent of all material present and that the average weight per piece of obsidian was equal to the mean at Matcacapan (0.74 g). This method produces an estimate of 241–482 g of obsidian per household per 250 years, or an annual rate of 0.96–1.93 g per structure group. If one assumes that Rice's (1984) obsidian-chert ratios of 0.02–0.03 better approximate the total utilized by the bulk of the Maya, then the absolute amount utilized would have been significantly less than 1 g per family per year.

⁵ Regional consumption by the Tikal polity is based on the following assumptions (see Culbert n.d. for a fuller discussion). I assume that the Tikal polity probably had control of an area 120 km in diameter. I

of obsidian traded to all of the Maya Lowlands was probably significantly less than my estimate for the Tuxtlas region alone. This difference in degree of reliance is all the more dramatic, considering the fact that the distance over which obsidian was exchanged from source region to consumers in both areas was essentially the same.

Differences in the volume of exchange probably had great impact on how goods were exchanged and the character of Teotihuacan influence in both areas. In an earlier study I suggested that Teotihuacan merchants moved large quantities of obsidian from Kaminaljuyu to Tikal which functioned as a secondary distribution node relative to the Peten and the Southern Maya Lowlands (Santley 1983). At Tikal and other Maya sites, however, obsidian was used in much smaller quantities than previously suspected, even on a polity-wide basis, due to the presence of locally available substitutes. This low incidence of use, I now feel, acted as a major impediment to distribution by large caravans, and the Teotihuacan presence in the Peten probably had little to do with obsidian exchange. Indeed, the impression that one gets is that Teotihuacan artifacts are extremely rare in the Peten. Even at Tikal, where a dynasty was established with Central Mexican connections, the period during which Teotihuacan elements were expressed in architecture, sculpture, and other media was very brief (Coggin 1983). It is possible that Teotihuacan attempted to dominate the movement of obsidian from the Guatemalan Highlands to the Maya Lowlands. That strategy, however, was probably doomed to failure no matter how accessible the Teotihuacan presence at Tikal made obsidian, given the abundance of supplies of alternative materials.

The situation on the South Gulf Coast was entirely different. There were no locally available materials that were used in significant quantities, and populations had to rely on long-distance exchange networks to provide for most of their obsidian. In consequence, consumption levels were much higher, which in turn stimulated the development of large-scale distribution systems that could efficiently move large volumes of material long distances each year. It also appears that Teotihuacan influence was much more pervasive on the South Gulf Coast than it was in the Maya Lowlands. Moreover, physiochemical characterization has established that most of the foreign pottery present at Teotihuacan itself came from the Gulf Coast, implying strong mutual or dual-directional commercial relationships between the two regions (Evelyn Ratray, personal communication). As indicated above, I suspect that the Teotihuacan base at Maticapan was set up in part to take advantage of this situation. I also suspect (but cannot as yet demonstrate) that much of the obsidian shipped long distances in

the Middle Classic period was hauled in large caravans directed by Teotihuacan merchants.

In the Late Classic Teotihuacan declined in importance, Maticapan ceased to be a major center of influence, and new power centers emerged on the South Gulf Coast. There was still, however, a substantial occupation in the Tuxtlas which consumed obsidian in volume. In fact, data from Maticapan suggest that the Late Classic exchange system was an even more effective distributor of obsidian than its Middle Classic predecessor; larger amounts of obsidian were used per capita, greater quantities came from more distant sources, and more obsidian was exchanged as prismatic blades. A consideration of the preceding evidence raises two important additional questions.

First, if Teotihuacan was no longer in control of the system, then who was? In my opinion, El Tajin took over the distribution previously overseen by Teotihuacan. Although the political and economic status of Middle Classic El Tajin is far from clear, the picture that is emerging "suggests that it was the home of a powerful and militaristic society, possibly an ally or colony of Teotihuacan" (Zeitlin 1982: 268). El Tajin, however, reached maximum size after the decline of Teotihuacan, a time period when artifacts from central Veracruz appear up and down the Gulf Coast (Coe 1965; Krotser and Krotser 1973). No lithic workshops are known from the area around Zaragoza, Oyameles, and the other obsidian deposits, but El Tajin-style architecture and artifacts have been discovered at sites in the source region, implying conquest, colonization, or close political ties between the two areas (David Mora, personal communication).

Second, if long-distance exchange networks were dominated by El Tajin in the Late Classic, then why was not another enclave established at Maticapan or at some other site in the Tuxtlas? The fact that the Teotihuacan presence was not replaced with one from central Veracruz indicates that the structure of the two systems was not isomorphic. However, patterns of obsidian production and consumption remained the same, suggesting a shift in how producers articulated with consumers. This change in mode of distribution, I point out, may have involved an increasing emphasis on water transport. Shipping goods by canoe would certainly obviate the need for large bases where caravans could be provisioned because water transport is twenty to forty times more efficient than hauling goods overland. Thus convoys carrying the same amount of goods would be much smaller in size and relatively immune from attack when passing through hostile territory. Moreover, the exchange system should be oriented to sites on or near the coast, not to inland centers like Maticapan which would now be serviced by small groups of local merchants moving overland.

At the beginning of this paper, I suggested that control of long-distance production-distribution networks was the primary reason why centers in Central Mexico were larger in size and their populations more urbanized. Much of the output of Teotihuacan's obsidian workshops was probably distributed mainly throughout Central Mexico, but a reasonably large share also reached distant areas like the South

estimate that this area contained 253,210 house mounds, assuming that house mound density averaged 112 per km², that only 50 percent of the area was physically inhabited due to the presence of bajos, lakes, and savannas, and that only about 40 percent of all structures were occupied in the Early and Middle Classic. Application of the estimate of 0.96–1.93 g per structure indicates that the entire Peten would have required only about 243–489 kg of obsidian per year, or the equivalent of 10.6–21.6 burden bearer loads. In all likelihood, these estimates ought to be reduced substantially, since average population densities were probably significantly less than the mean of 112 structures per km² used above.

Gulf Coast (Santley and Pool n.d.). The evidence from Matacapan and Kaminaljuyu implies that Teotihuacan managed alternative distribution systems as well. This domination apparently required a set of enclaves to provision Teotihuacan caravans with local exotics and to provide intelligence on market conditions in each region. This system worked reasonably well so long as goods were hauled overland.

With the decline of Teotihuacan, El Tajin emerged as the major political power on the Gulf Coast. El Tajin's power and prestige, however, never equaled Teotihuacan's, nor is it likely that El Tajin approached Teotihuacan in size or degree of internal differentiation. The withdrawal of Teotihuacan undoubtedly put considerable stress on the production system making macrocores from Zaragoza obsidian.

South Gulf Coast markets were no longer accessible, and El Tajin probably did not have the capability to outfit large caravans of porters carrying goods overland or the contacts to provision them down-the-line. The obsidian production-distribution system based in central Veracruz, I suggest, adapted to these new conditions in the only way possible: by emphasizing transport by canoe. This new distribution system apparently did not require enclaves in foreign territory, but because larger loads could be moved more efficiently, it provided South Gulf Coast markets with as much obsidian as its predecessor. In fact, the establishment of autonomous, sea-borne distribution systems based in central Veracruz at the end of the Middle Classic may also account for the abandonment of the Teotihuacan enclave at Matacapan. This I leave as a problem for future research.

TABLE. CHRONOLOGICAL CONCORDANCES (AFTER BLANTON 1978; COE 1966; ORTIZ N.D.; AND SANDERS ET AL. 1979)

Sidereal Years		Basin of Mexico	Tuxtlas region	Valley of Oaxaca	Maya region
1200					
1100		MAZAPAN	EARLY POST-CLASSIC	PERIOD V	EARLY POST-CLASSIC
1000					
900		COYOTLATELCO	L. LATE CLASSIC	PERIOD IV	LATE CLASSIC
800			E. LATE CLASSIC		
700		METEPEC	M. CLASSIC C		
600		XOLALPAN	M. CLASSIC B	PERIOD IIIb	MIDDLE CLASSIC
500		TLAMIMIOLPA	M. CLASSIC A		EARLY CLASSIC
400			EARLY CLASSIC	PERIOD IIIa	PROTO-CLASSIC
300		MICCAOTLI			
200	A.D.	LATE TZACUALLI	PROTO-CLASSIC	PERIOD II	LATE PRE-CLASSIC
100		E. TZACUALLI			
0					
100	B.C.	PATLACHIQUE	TERMINAL PRE-CLASSIC	PERIOD LATE I	
200					
300		TICOMAN III	LATE PRE-CLASSIC	PERIOD EARLY I	
400		TICOMAN II			
500		TICOMAN I		ROSARIO	MIDDLE PRE-CLASSIC
600					
700		CUAUTEPEC	MIDDLE PRE-CLASSIC	GUADALUPE	
800					
900		LA PASTORA			
1000					

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Disconnection, Foreign Insignia, and Political Expansion: Teotihuacan and the Warrior Stelae of Piedras Negras

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INTRODUCTION

THIS PAPER EXAMINES THE APPEARANCE of Teotihuacan costume and symbols in Classic Maya public art and their role as definers of rank and political legitimacy. As an analytical paradigm, I have adopted the binary notions of *connection* versus *disconnection*. These terms refer to relationships of rank or social bond between ruler and subject. I aim to show that Teotihuacan motifs are often adopted in Maya art in the context of social or rank *disconnection* for purposes related to *local* politics. Thus, although the Maya recognized Teotihuacan motifs as culturally external, their appearance in the Maya area, particularly in the Late Classic, reflects internal politics rather than a Teotihuacan presence. The study focuses on the sculpture of Piedras Negras, Guatemala, where Teotihuacan motifs appear within sharply defined thematic categories, notably the so-called “warrior stelae.” The broader issue under examination concerns the use of foreign pictorial systems in manipulating public image, a practice firmly entrenched in the political history of Mesoamerica.

Connection versus Disconnection

While the power held by a ruling elite over its subjects may remain constant, statements of rank, which order and characterize their social bond, fluctuate more dramatically. One might assume that the sole impulse of elites would be to “pull rank,” that is, to distance themselves from the masses. On the contrary, social gaps are often downplayed or camouflaged through a variety of persuasive tactics.

An instructive example of this process is seen in Maurice Bloch’s (1977) study of pre-nineteenth-century kingdoms of Central Madagascar. Here members of the population belonged to descent groups or *demes* which enjoyed differential rank. The highest rank, *andriana*, which included the

ruling class, pertained to a sizable portion of the population. As a result, a great disparity ensued between the number of people holding the highest rank, which was large, and the number wielding political power, which was small. Bloch describes this lopsided arrangement as a *disconnection* between power and rank. It ultimately benefits the elite by creating a perceived social bond between themselves and the masses without yielding political power. To further strengthen social bonds, the king would direct key fertility rituals. Acknowledged to have supernatural access to fertility, the king was considered essential to these ceremonies crucial to the well-being of the community. This royal public image was one that purposefully diminished perceived rank differences, making those who wielded power seem the very embodiment of *mainstream* social and religious values.

Bloch’s article treats the issue of rank connection which he rightly identifies with a fertility complex and the beneficial, cyclical forces of nature. In Mesoamerican art, elite connection to the masses often follows a similar path. Rulers symbolically align themselves with what I call “subsistence mythology” which encompasses fertility in the broadest sense and beneficial natural cycles. This fiercely conservative dimension of a belief system is central to the lives of peasant farmers and would be a natural target of political propaganda.

Strategies of kingship can also emphasize a *disconnection* between the rank of ruler and subject. Social disconnection is often tied to warfare and exclusivity obtained through restricted class status. Disconnection from the masses also has many uses for the controlling elite. It excuses behavior, such as ruthless militarism, that might be considered repugnant to mainstream values. Disconnection also justifies the implementation of an exclusive dynastic line which defines itself in terms of palpably different qualities not seen in the general population. These exotic qualities may include a prestigious nonlocal origin or affiliation. A disconnection strategy can be advantageous for elites of societies undergoing expansion through war or changes of political administration.

These two strategies of kingship—connection versus

I would like to thank several distinguished scholars who assisted me in this study. My colleagues at Dumbarton Oaks, Janet Berlo, Flora Clancy, and Karl Taube, freely offered their expertise on a variety of subjects. I would also like to thank Esther Pasztory, Linda Schele, and Kevin Johnston for allowing me to draw from their unpublished manuscripts. Finally, I thank Dumbarton Oaks for providing me support for this and other projects.

disconnection—can plainly be viewed in the art of Piedras Negras. Connection strategies are implemented when the ruler first takes office, on his accession monuments. Disconnection strategies emerge later in his reign in contexts of warfare and are promulgated through a pictorial tradition associated with Teotihuacan. Turning now to Piedras Negras, I will begin with an overview of the site and its dynastic sequence.

PIEDRAS NEGRAS

Piedras Negras is a Classic Maya ceremonial center on the east bank of the Usumacinta River in Guatemala. In times past, the dense architectural complex housed approximately seventy carved monuments, including stelae, circular and square “altars” on stone supports, lintels, and thrones. Surveyed by Teobert Maler in 1895 (1901–3), the site was later excavated by the University Museum, University of Pennsylvania (Satterthwaite 1935, 1936, 1944–54; Butler 1935; Coe 1959). In typically exhaustive fashion, Morley (1937–38: 3, chap. 8) produced a fundamental work on the calendrical inscriptions. Another benchmark in the study of Piedras Negras is Proskouriakoff’s celebrated article (1960) which proved the historical content of Maya inscriptions. Her stunning achievement marked the beginning of renewed interest in Piedras Negras inscriptions and pictorial imagery.¹

The Piedras Negras Dynastic Sequence

Our present understanding of the Piedras Negras dynastic sequence derives largely from Proskouriakoff (1960). She identified seven Late Classic rulers, their accession dates, Period-ending dates, and, for some, birth and death dates. In a recent article, Houston (1983) argued against the existence of her proposed “Ruler 6,” noting that the protagonist of the Period-ending on Stela 16 (“Ruler 6’s” primary monument) repeats the name of Ruler 5 on Stela 14. Thus Ruler 5 was in charge for the dedication of Stela 16. The accession recorded on Stela 16, noted by Proskouriakoff, must be of a non-Piedras Negras individual. Supporting Houston’s view is the fact that Ruler 5’s reign would have lasted less than six tuns if the Stela 16 accession were that of a new Piedras Negras ruler. Taking Houston’s work into account, then, the Late Classic dynastic sequence stands as follows:

TABLE 1

Ruler	Accession		
1	9.8.10.6.16 ²		
2	9.10.6.5.9	gap 1.15.16.13	35 years
3	9.12.14.13.1	gap 2.8.7.12	48 years
4	9.14.18.3.13	gap 2.3.8.12	43 years
5	9.16.6.17.1	gap 1.8.13.8	28 years
7	9.17.10.9.4	gap 1.3.10.3	23 years

Table 1 shows that Late Classic Piedras Negras rulers enjoyed long reigns, averaging thirty-five years. Moreover, after coming to office they generally erected a carved monument on successive hotuns, or five-year periods, so that each ruler accumulated a large corpus of sculpted monuments. They frequently grouped these monuments around architectural complexes which they also commissioned. This practice provides unusually clear generational distinctions in monument groups which can be corroborated by textual dates. Thus Piedras Negras offered an ideal data base for Proskouriakoff to formulate her historical hypothesis.

Recent research has also clarified Early Classic history at Piedras Negras. Especially important are Lintel 37 of Yaxchilan, which mentions a Piedras Negras lord (Kelley 1976: fig. 74; Marcus 1976: 90), and Lintel 12 of Piedras Negras, which mentions Knotted Eye Jaguar of Yaxchilan (Schele 1984: 14). Johnston (n.d.) has summarized current views on this period and posits the existence of four Early Classic rulers, whom he calls Rulers A–D. Adding their reigns to the Late Classic sequence gives Piedras Negras a four-hundred-year dynastic history, from about A.D. 400–800, a span of political florescence fitting the general pattern of the western Usumacinta area.

THE CONNECTION STRATEGY AND NICHE-FIGURE STELAE

Proskouriakoff noted that on the first dedicatory hotun after the ruler’s inauguration to power a certain type of stela was erected whose imagery she identified as the “ascension motif” (1960: 255). These monuments are also referred to as “niche-figure” stelae (Fig. 1). Four are known from Piedras Negras: Stelae 25 (Ruler 1), 6 (Ruler 3), 11 (Ruler 4), and 14 (Ruler 5).³ Of these, Stelae 25 and 14 feature the ruler’s inauguration date as the Initial Series of the text. The Initial Series date is a guide to the major event being celebrated, further typing these sculptures as “accession monuments.” Ruler 2’s accession monument is Stela 33 which is a profile variant of the niche-figure stelae.⁴ His accession is noted in a Calendar Round date on the front, 8 Muluc 2 Zip, 9.10.6.5.9. The Dedicatory Date of Stela 33,

¹ See Berlin (1968), Kelley (1976), Marcus (1976: chap. 4, *passim*), Schele (1982, *passim*), Schele and Miller (1986: 148–150, 219), Houston (1983), Stuart (1985), Bricker (1986: appendix C), and Johnston (n.d.).

² All of the hieroglyphic dates cited can be found in Morley (1937–38, 3: chap. 8) and Proskouriakoff (1960), unless otherwise stated.

³ Looters have ravaged the site of Piedras Negras, sawing, smashing, and removing many of its carved monuments. Of the niche-figure stelae only Stela 6 (National Museum of Archaeology and Ethnology, Guatemala City) and Stela 14 (University Museum, University of Pennsylvania) have survived intact. Of Stela 11, just the figure survives and is now housed in the Houston Museum of Fine Arts. Other monuments removed to museums or private collections in the United States are Stelae 2 (Minneapolis Museum of Arts; Mayer 1980: pl. 20), 3 (Mayer 1980: 11), and 5 (Metropolitan Museum of Art). In Europe are Stelae 35 (Peter Ludwig collection; Bolz-Augenstein and Disselhoff 1970: no. 9) and 34 (*Sculpture Maya* 1966: pl. 17). The rampant pillaging of monuments from Piedras Negras has made Maler’s and Morley’s published photographs of inestimable value.

⁴ All Piedras Negras monuments not illustrated but mentioned in the text can be found in Maler (1901–3): Stela 2, pl. xv, 1; Stela 6, pl. xv, 3; Stela 11, pl. xx, 1; Stela 14, pl. xx, 2; Stela 25, pl. xxii; Stela 31, pl. xxv; Stela 33, pl. xxvi, 2; and Morley (1937–38, 5): Stela 16, pl. 138; Lintel 12, pl. 119, c.



Fig. 1 Stela 11, Piedras Negras. Drawing by David Stuart.

9.10.10.0.0 (ca. A.D. 642), also falls in the first hotun after accession, in keeping with the niche-figure stela type.

The niche-figure stelae at Piedras Negras have strongly codified imagery. A dignitary, carved nearly in the round, is seated on a jaguar skin cushion within a deep niche. The shallowly carved images framing the niche formally and iconographically describe a spatial and ritual context of cosmic proportions. The Principal Bird Deity (Bardawil 1976) presides at the top of the scene. The sides consist of skybands or, in the case of Stela 14, elongated representations of God C. Sky, water lily, and earth bands occupy the lower register. In the middle are the front and rear heads of the Cosmic Monster. Taube (n.d.) has pointed out two important features of the imagery: a straw deer effigy and scaffold-like structure which enframe the figure. He convincingly argues that their presence concerns ritual torture and sacrifice for renewal ceremonies. The theme of sacrifice is reiterated in the supine victim lying in a bowl on

Stela 11 and the bloodletter being handed to the king by a woman on Stelae 14 and 33.

The overarching themes of the niche-figure stelae are natural cycles (agricultural and astronomical) and world creation. Residing at the center of these high-minded concepts is the ruler himself. The niche-figure stelae and related monuments, such as the Quirigua zoomorphs, are summary views of the most deeply held social and religious tenets that define the Maya universe (Stone n.d.). Given these concerns, it is not surprising to find a stylized representation of maize, a quintessential agrarian symbol, crowning the ruler's head in Stelae 25 and 6. The niche-figure stelae echo Bloch's view of royal propaganda that binds the elite with the masses—what I call a strategy of social connection. By his association with maize, blood sacrifice, and the Cosmic Monster, the ruler personifies fertility and cosmic creation in association with his taking of office. Though these supernatural powers elevate his status, he is at the heart of fundamental community concerns and values. Indeed, if Taube's (n.d.) interpretation is correct, the ruler offers himself, most likely symbolically, to nurture the community through the gruesome "scaffold sacrifice." On Stela 6 he wears a cord around his chest, as captives often do, possibly an indication of his sacrificial status.

THE WARRIOR STELAE

Sites such as Piedras Negras, Bonampak, and Yaxchilan offer the richest tradition of public militaristic monuments in the Late Classic Maya area. Militarism is evident in the earliest dated Piedras Negras monument, Lintel 12 (DD 9.4.0.0.0, ca. A.D. 514), which shows Ruler D surrounded by bound, kneeling prisoners. In the Late Classic period a highly codified military portrait-type developed at Piedras Negras, the first known example appearing in the reign of Ruler 1—Stela 26 (DD 9.9.15.0.0, ca. A.D. 627). The stylistically parallel Stela 31 from Piedras Negras would also fall under the reign of Ruler 1 based on Morley's reconstruction of the Dedicatory Date as 9.10.5.0.0. Similar monuments were erected in successive reigns: Rulers 2 (Stela 35), 3 (Stelae 7 and 8), and 4 (Stela 9). Inscriptional evidence suggests that the Dedicatory Date of warrior stelae followed a whole number of katuns after the Dedicatory Date of the earlier accession monument:

TABLE 2

Ruler	Accession Monument DD	Warrior Monument DD
1	9.8.15.0.0 (St. 25)	9.9.15.0.0 (St. 26)
2	9.10.10.0.0 (St. 33)	9.11.10.0.0 (St. 35)
3	9.12.15.0.0 (St. 6)	9.14.15.0.0 (St. 8) ⁵

⁵ The Dedicatory Date here is that proposed by Proskouriakoff (1960: 458) for Stela 8. Morley's proposed Dedicatory Date is 9.13.0.0.0 8 Ahau 8 Uo. As noted by Proskouriakoff and Johnston (n.d.: 50), there is a three katun anniversary statement of Ruler 3's birth on Stela 8, a date that can be placed at 9.14.12.7.2. The hotun closest to the latest date on Stela 8, then, is 9.14.15.0.0, and I suspect that is why Proskouriakoff placed the Dedicatory Date here. This Dedicatory Date date, however, is not found on Stela 8, a fact possibly due to erosion of the monument.

Two of the warrior stelae not included in Table 2 are Stela 7 and 9. Stela 7 opens with an Initial Series date 9.14.10.0.0, which is generally assumed to be its Dedicatory Date. This date falls under the reign of Ruler 3. The text also mentions the death of Ruler 2 (Stuart 1985: 180) and gives his status as the father of Ruler 3. The last date on the text, however, 4 Ahau 13 Yax (9.15.0.0.0), occurs during the reign of Ruler 4 which began on 9.14.18.3.13. The textual emphasis of Stela 7 is on Ruler 3, yet the last date postdates his reign. This implies that Stela 7 is a posthumous portrait of Ruler 3. Nonetheless, Stela 8 ties a warrior stela to Ruler 3's accession monument. Of the four Piedras Negras rulers with warrior stelae, only Ruler 4 lacks a warrior stela which ties the Dedicatory Date to that of his accession monument. His warrior portrait, Stela 9, has a Dedicatory Date of 9.15.5.0.0 (ca. A.D. 736), while his accession date falls on 9.14.18.3.13, as just mentioned. Three out of four rulers with warrior portraits make the katun-ending connection with accession monuments. This suggests a tradition of intentional linkage.

For Ruler 5 we have only an accession monument, Stela 14; no warrior portrait has yet been found. Though Ruler 7 is magnificently portrayed as a conquering warrior on Stela 12, his low-relief, profile presentation does not follow the formula of the warrior portrait series.⁶ Nor does Ruler 7 have a niche-figure monument. In effect, the monumental sculpture of Piedras Negras shows a strong correlation between the erection of accession monuments of the "ascension motif" type and warrior portraits. With the exception of Ruler 5, who has no known warrior stela, rulers erect both types with the Dedicatory Date of the warrior stela commonly falling a whole number of katuns after the accession monument's Dedicatory Date.

THE TEOTIHUACAN MILITARY COSTUME

Though the warrior stelae may be chronologically linked to accession monuments, they have a decidedly different flavor. The niche-figure stelae are grounded in core elements of the Maya iconographic system—the Principal Bird Deity, skybands, the Cosmic Monster, etc.—all gracefully circumscribing a small, commanding portrait of the ruler. The rigid, more iconographically spare warrior stelae (Figs. 5, 7, 12–14) have obvious artistic connections to the art of Central Mexico, a fact noted early on by Seler (1902–23: 5, 464) and Spinden (1913: fig. 251). It is now generally recognized that these Central Mexican motifs were disseminated or borrowed from Teotihuacan.⁷ This

⁶ Schele and Miller (1986: 219) posit that artists of Pomona carved Stela 12.

⁷ This paper rests on the assumption that the pictorial system traditionally labeled as "Teotihuacan" which appears in the Maya area in the Early Classic did, indeed, disseminate from Teotihuacan. This view in large part is based on the fact that the style and iconography of the motifs in question have an organic relationship to the art of Central Mexico and reflect the predominant art style of Teotihuacan. In contrast, in the Maya area they form a tightly clustered, nonpredominant subunit of style that, in my view, lacks this organic relationship. Coupling this fact with Teotihuacan contact with the Maya area, attested archaeologically, creates a plausible scenario in terms of the origin and dissemination of these motifs from Teotihuacan to the Maya area. It is not the purpose of this paper to argue that particular issue. For an alternative approach to the

site had significant cultural contacts in the Maya area during the Early Classic at which time its influence is widely seen in Maya art (Kidder et al. 1946; Sanders and Michels 1977).

To find Teotihuacan traits at Piedras Negras in a militaristic context is consonant with their other appearances in the Maya area where militarism is a dominant theme (Millon 1973: 305; Pasztory 1974; Schele 1984: 33; Schele and Miller 1986: 213). Yet it can be difficult, if not impossible, to determine when the label of "military" is appropriate. The militaristic label for Teotihuacan traits usually stems from the presence of implements of war and captives, references to warfare in accompanying texts, and the absence of other dominant themes. What seems to have transpired in the Maya area is that a cluster of costume attributes with a Teotihuacan source came to be used in a consistent, integrated way to outfit warriors. This "Teotihuacan military costume," as I will call it, referring to the Lowland Maya usage, could draw from a pool of Teotihuacan traits as well as Lowland Maya ones to create many versions of the costume.

The Early Classic Teotihuacan Military Costume

Early and Late Classic versions of the Teotihuacan military costume are remarkably consistent. One familiar version from the Early Classic is the side figures of Stela 31, Tikal (Fig. 2). Most components of the costume are well known: mosaic headdress of both the zoomorphic and rounded helmet type, *Pecten* shell necklace, circular device at the hip which Taube (1983) has identified as a back mirror or *tezacuitlapilli*, and furry knee bands. All of these features of costume occur at Teotihuacan. The mosaic helmets, both in frontal and profile views, are particularly well represented in ceramic media at Teotihuacan (Berlo n.d.b: pls. 5a, 6, and 7).

Schele (n.d.a) observes that the tail cluster at the rear, also found in figurines from the Becan cache, is part of this imagery.⁸ She cites an analogy with the coyote warriors from the Atetelco murals. I concur with her reference to coyotes; moreover, I believe that coyote fur was an important component of the costume in general. The fluffy knee bands may also represent coyote fur. Tlaloc B, who is associated with this military imagery (Pasztory 1974), appears at Teotihuacan covered in a coyote costume with clusters of tails draping his head (Fig. 3). Note that a black spot marks the end of the tail in both Figures 2 and 3. The fact that the coyote, *Canis latrans*, has a black-tipped tail (Leopold 1972: 396) further supports the coyote identification at both Teotihuacan and Tikal.

question of the dissemination of "Mexican" motifs in the Maya area see Clancy (n.d.: 19–21, 34–67).

Teotihuacan-derived motifs and costumes in the Lowland Maya area have been the topic of an extensive literature. See, for example, Hellmuth (n.d.), Coe (1972), Millon (1973), Coggin (n.d.), Berlo (n.d.a; 1984), Pasztory (1978), and Schele (n.d.a).

⁸ The presence of the tail as a component of the Teotihuacan complex seems to have been first noted by Hellmuth (n.d.: 44, fig. 26). He mentions examples from Monte Alban (e.g., Tomb 104) and Kaminaljuyu (e.g., ceramics from Tomb B-II). Perhaps not noticed was that the tails can appear within the headdress; see painted stucco vessel in the Burial 10 cache from Tikal (Coe 1980: 102) and Fig. 13.

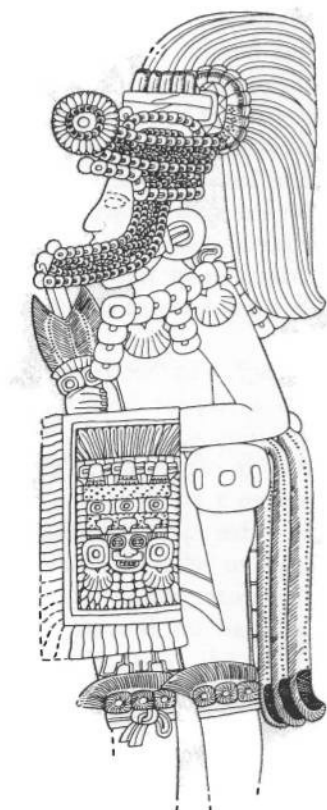


Fig. 2 Stela 31, Tikal, right side (after Jones and Satterthwaite 1982: fig. 52). Courtesy of the University Museum, University of Pennsylvania.

The implements of war, the fringed, square shield and *atlatl* (a weapon strongly associated with Central Mexico), are also distinctive of the Teotihuacan military costume. The reference is especially clear in the right-hand figure of Stela 31, Tikal (Fig. 2) where the shield is emblazoned with the face of a Tlaloc impersonator, related to Tlaloc B, whom Pasztory (1978: 138) thinks was the patron deity of Teotihuacan. Iconographic detail in this image is fully consistent with Teotihuacan portrayals (Millon 1973; Pasztory 1974: 13–15). With such glaring direct quotations from Teotihuacan art at this time, we must assume that the Maya understand the integrity of the Teotihuacan iconographic system and are invoking it in a deliberate way.

A few elements of the military costume missing in Stela 31 can be seen in Stela 1 from Tres Islas (Fig. 4). Here a bag that often accompanies Teotihuacan traits is carried in the left hand. Its usage in Teotihuacan and the Maya area is not particularly restricted in context, turning up in agrarian rites as well as in military scenes. In its typical



Fig. 3 Detail of border of east porch, Atetelco, Teotihuacan (drawn after Pasztory 1974: fig. 9).



Fig. 4 Stela 1, Tres Islas (drawn after Greene et al. 1972: pl. 97).

form the bag has a handle, one or two knots, a rectangular pouch, and a pendant element which I think in many cases represents fur or an animal tail. Sometimes the handle is made out of the same furry material. Another Teotihuacan trait on the Tres Islas figure is the cloth collar broken up into small panels. This also survives into the Late Classic at Copan, Hieroglyphic Stairway figures (Keleman 1943: 2, pl. 87), Cancuen, Stela 2 (Morley 1937–38: 5, pl. 97, d), Piedras Negras, Lintel 2 (Schele and Miller 1986: 148), Lacanja Stela 1 (shield figure; Greene et al. 1972: 164), and other sites.

Several other costume elements can be added to this list for the sake of the present discussion, such as the dome-like headdress which Schele (n.d.a) aptly designates the “Balloon Headdress.” Eduard Seler (1902–23, 5: 464) was the first scholar to note the Balloon Headdress as a shared costume element in the Maya area and Teotihuacan. He conjectured that it was constructed of unspun cotton. Adorned with a long-tailed bird, the Balloon Headdress is first seen in the Lowland Maya area with Stela 5 from Uaxactun (Berlo n.d.a: 31). Its association with Teotihuacan seems certain. Berlo (n.d.b: fig. 17) illustrates a figurine from Teotihuacan which combines a long-tailed bird with a Balloon Headdress, forming a direct parallel with the Uaxactun headdress. Other Teotihuacan-derived iconographic elements include the trapeze-and-ray sign (Berlo n.d.a), the reptile eye glyph, and a globular trident

form, perhaps representing dripping fluid, all found at Teotihuacan and in the Early Classic Maya area. The presence and meaning of these Teotihuacan motifs, found in widely separated areas of Mesoamerica, is considered by other authors in this volume (see Baird; Nagao; Berlo, Chap. 2).

The Teotihuacan Military Costume at Piedras Negras

Stelae 26 and 31: The Mosaic Helmet. The warrior stelae from Piedras Negras exhibit fundamental continuity with the Early Classic costume and insignia. Stelae 26 (DD 9.9.15.0.0, ca. A.D. 627) and 31 (9.10.5.0.0?, ca. A.D. 638) are quite similar. In both, the frontal mosaic dragon helmet dramatically covers over half of the picture plane (Fig. 5). The open snout forms a central arch, crowned by smoking tubes which frequently are thrust into the creature's nostrils. The great bifurcated tongue hangs to the waist. After about one hundred years this helmet reappears with Stela 7 (9.15.0.0.0, ca. A.D. 731) (Fig. 13). A comparison of the three frontal mosaic helmets shows that the shape of mosaic components varies. These discoidal and rectangular "platelets" could very well be carved from *Spondylus* (spiny oyster) shell. Berlo (n.d.b) notes that this material was used



Fig. 5 Stela 26, Piedras Negras. Peabody Museum, Harvard University—photograph by Teobert Maler.

prolifically in mosaic costume paraphernalia in Highland Guatemala and Piedras Negras itself. She postulates that the 209 carved *Spondylus* shells from Burial 5 at Piedras Negras may have been one of these headdresses. The portrayal of a frontal mosaic headdress is unusual in Maya monumental art of the Late Classic. Apart from Piedras Negras, the only other examples of which I am aware are several Late Classic carved columns from Campeche (V. Miller 1985: fig. 14; Mayer 1978: no. 33). As will be seen, the warrior stelae share other features with art of the Northern Maya area.

The Serpent-headed Staff. The Stela 26 figure grasps a staff which turns into a serpent head, a striking motif also found on Stela 31 (Fig. 6, a and b). It is likely that the serpent-headed staff is connected to the Teotihuacan complex, as it appears on a painted plate in conjunction with a scene heavily laden with Teotihuacan influence (Fig. 6c).⁹ It is tempting to relate it to the *atlatl* which is often held opposite the square shield. The serpent-headed *atlatl* held by Chaan-Muan on Bonampak Stela 3 suggests such a parallel (Fig. 6d). The tightness of the comparison is supported by the shared flamelike volutes either emitted from the mouth (Fig. 6a–c) or the tail (Fig. 6d).

On other warrior stelae at Piedras Negras the ruler holds what is perhaps a ceremonial version of a weapon with a personified stone point (Fig. 6e). Only Stela 35 represents a realistic weapon—a sharpened long bone with the joint articulation hafted to a base by lashing (Fig. 6f).

In all cases the militaristic intent is reinforced by the fringed, square shield and bound captives framing the towering figure. It is likely that Teotihuacan motifs emblazoned the shields. Stela 7 (Fig. 13) displays the "dripping fluid" and cartouche sign, and Stela 26 (Fig. 5) may have displayed a frontal owl like Lintel 2 (Fig. 11). Unfortunately, the shield designs are poorly preserved.

Stela 35: The Balloon Headdress. On Stela 35 (DD 9.11.10.0.0, ca. A.D. 662), Ruler 2 wears a Balloon Headdress ornamented with criss-crossed strands of beads (Fig. 7). The protagonist of Lintel 4, who may also be Ruler 2,¹⁰ wears a Balloon Headdress completely covered in beads. On Stela 35 the central ornament of the headdress is a fringed cartouche with *akbal* infix, similar to mirrors identified by Taube (1983) (Fig. 8a). Indeed, the infix supports the mirror identification, as *akbal* marks obsidian mirrors (Schele and Miller 1983: 15–16). A serpent with menacing flint blade tongue brackets the mirror at the left and right. The cartouche (mirror) and blade-tongued serpent also appear on Stela 8 (Fig. 8b). This motif is quite

⁹ The plate shows a figure garbed in Teotihuacan attire, including Balloon Headdress with trapeze-and-ray insignia, and back mirror (Robicsek and Hales 1981: Vessel 107). He rides a serpentine creature also marked with the trapeze-and-ray signs. The human figure holds the curving serpent-headed staff. Another interesting parallel is with a curved serpent staff, representing a rattlesnake, which Gamio (1922: 283) calls a *coatopilli*. It is held by Xiuhtecuhli on page 24 of the Telleriano Remensis in conjunction with an *atlatl*.

¹⁰ Though the inscription on Lintel 4 is highly eroded, Johnston (n.d.) points out that the text may recall the death of Ruler 1 (M2–N2), in which case the individual portrayed would most likely be Ruler 2.

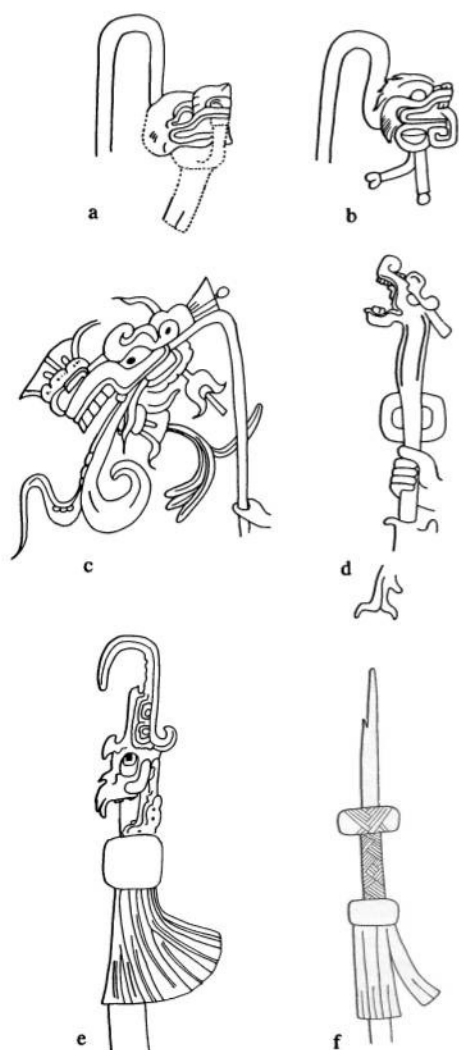


Fig. 6 Comparison of serpent-headed staffs and spears. (a) Stela 7, (b) Stela 31, (c) Detail of polychrome plate (drawn after Robicsek and Hales 1981: Vessel 107), (d) Bonampak Stela 3, *atlal* (drawn after Mathews 1980: fig. 4), (e) Stela 8, (f) Stela 35.

specific, occurring in the Lowland Maya area as early as the beginning of cycle 9 (Fig. 8c) and as late as 9.16.0.0.0 on Stela J from Quirigua (Fig. 8d). While the Balloon Headdress can be associated with Central Mexico, the distribution of the blade-tongued serpent and mirror motif is not clear. However, the use of a mirror as a central headdress ornament is particularly prolific in costumes at Teotihuacan (e.g., Seler 1902–23, 5: 463 fig. 54a). It seems possible that the mirror component represents a borrowing from Teotihuacan with the blade-tongued serpent as a Maya accretion. Given its use at Piedras Negras, the motif may have militaristic associations. The text of Stela J from Quirigua also mentions warfare which could explain its presence there.

The Wrist Pouch. Hanging beneath the shield on Stela 35 is the pouch which accompanies this codified costume. At Piedras Negras it is carried on the wrist of the hand holding the shield so that the upper portion of the pouch is obscured. Both the pouch on Stela 35 and that on Lintel 2



Fig. 7 Stela 35, Piedras Negras. Peabody Museum, Harvard University—photograph by Teobert Maler.

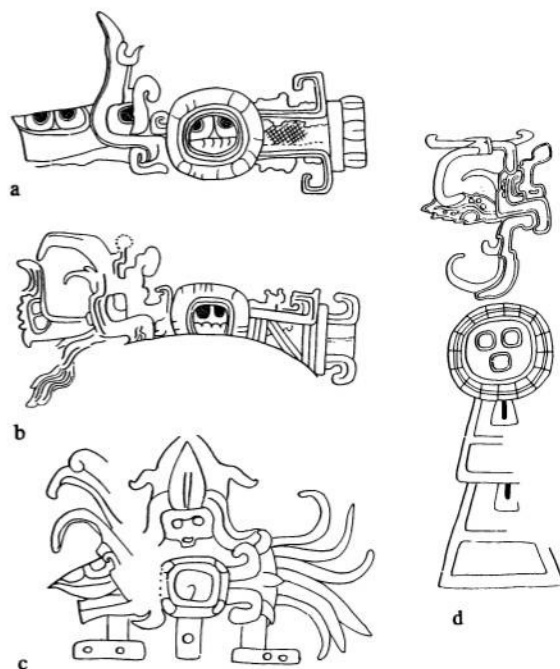


Fig. 8 Comparison of blade-tongued serpent and mirror motif. (a) Stela 35, (b) Stela 8, (c) Early Classic stela (drawn after Mayer 1984: pl. 44); (d) Stela J, Quirigua, north side.

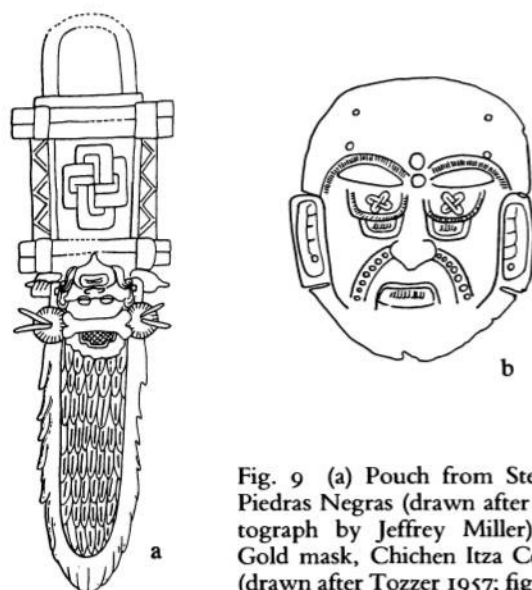


Fig. 9 (a) Pouch from Stela 6, Piedras Negras (drawn after photograph by Jeffrey Miller); (b) Gold mask, Chichen Itza Cenote (drawn after Tozzer 1957; fig. 92).

(Fig. 11), where Ruler 2 stands in near identical costume, seem to be textile bags.

The pouch is worth discussing in more detail. Usually identified as an incense pouch, the *copalxiquipilli* of the Aztecs (Seler 1902–23: 5, 415–416), it is carried in the Maya area in both religious contexts and combat scenes. On Yaxchilan Lintel 8 a cohort of Bird Jaguar IV carries one of these pouches on his wrist while he subdues a captive (Graham and Von Euw 1977: fig. 27). Moreover, in ritual contexts the pouch conveys militaristic overtones. One of its configurations at Piedras Negras illustrates my point. On two warrior stelae (Stelae 7 and 9) and on Stelae 2 and 6 (Fig. 9a), the pouch bears an inverted trophy head, sometimes with lolling tongue. On Stela 6, cloth strips pass through the ears, a sure sign of captive status (Schele 1984: 21). This “trophy head” style pouch is always adorned with interlocking rings (recalling the Aztec glyph for gold or precious substance). Its pendant element consists of either fur, possibly an animal tail, or a rattlesnake tail. This same type of pouch is also found on Uxmal Stela 14 (Kowalski 1985: fig. 6). The Chichen Itza cenote produced a hammered gold mask showing a captive head with the interlace signs on the eyes (Fig. 9b). That the Chichen Itza head represents a captive, perhaps his severed head, is suggested by the rows of dots surrounding the mouth (Schele 1984: Fig. 12e), drooping eyelids, and painful grimace. All of these traits together, in addition to the cloth strips in the ears seen at Piedras Negras, are compelling evidence that a captive’s head is represented. Furthermore, the Chichen Itza mask makes it clear that the interlace and trophy head form an integrated iconographic unit whose meaning is not presently understood. And once again, the art of Piedras Negras shares specific motifs with Northern Yucatan as Proskouriakoff (1950: 120) observed.

Neck Garment or Cotton Armor. The Stela 35 figure (Fig. 7) also wears a triangular neck piece gathered by a knot, repeated in the parallel costume on Lintel 2 (Fig. 11). A bulkier version is worn on Stela 9 (Fig. 14). This neck piece

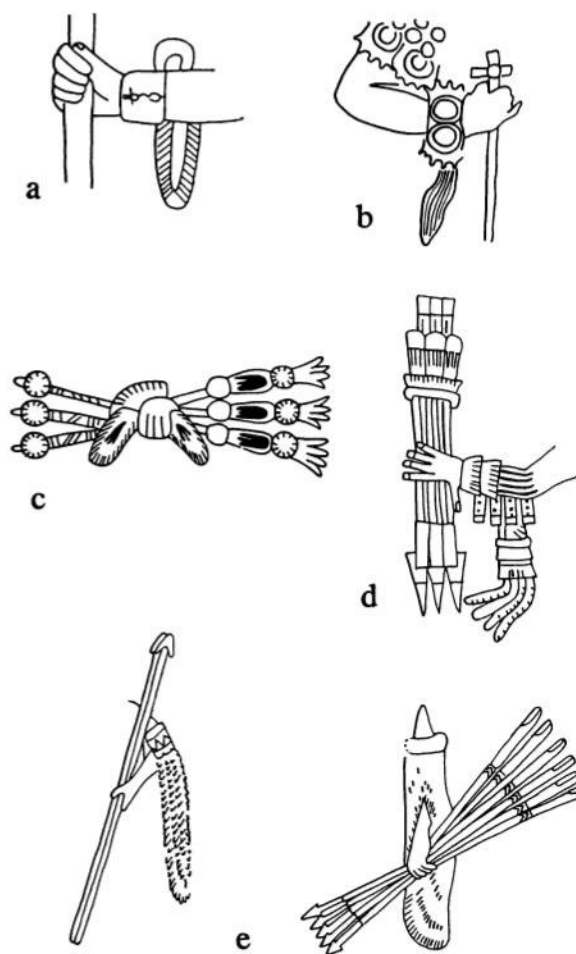


Fig. 10 Comparison of wrist-band fur motif. (a) Detail from Lintel 2, Piedras Negras; (b) Detail of Stela 1, Lacanja (drawn after Greene et al. 1972: pl. 76); (c) Detail of Mural 3 of Portico 3, Atetelco, Teotihuacan (drawn after Séjourné 1966b: fig. 83); (d) Detail of Vaticanus B, page 82 (drawn after Anders 1972); (e) Detail of warriors from Chichen Itza, Temple of the Jaguars, Lower Chamber (drawn after Tozzer 1930: figs. 5 and 8).

is well known from warrior figures at other Usumacinta-area sites, such as Bonampak (Mathews 1980: figs. 5–7) and Yaxchilan (Graham and Von Euw 1977: figs. 19, 41, 57). Though it may be a form of cotton armor, a similar garment is worn by God N and other characters on polychrome vases and in ceramic figurines (Robicsek and Hales 1981: Vessels 9 and 10). The garment is also carried by two figures in a ritual procession at Chichen Itza, Great Ball Court Relief, north wall (Tozzer 1957: 626–627).

Shell Necklace and Beaded Collar. The use of shells attached to the beaded collar on Stela 35, also found on Lintel 2 and Stelae 7, 8, and 9, parallels the Teotihuacan *Pecten* shell necklaces and beaded collars of the Early Classic (e.g., Fig. 2). The earlier necklaces are more faithful to Teotihuacan models where flat, smooth-sided shells were preferred. The spiny Piedras Negras shells are *Spondylus*, the preferred Late Classic version of the necklace, also found at Dos Pilas, Aguateca, and Lacanja (Fig. 10b).

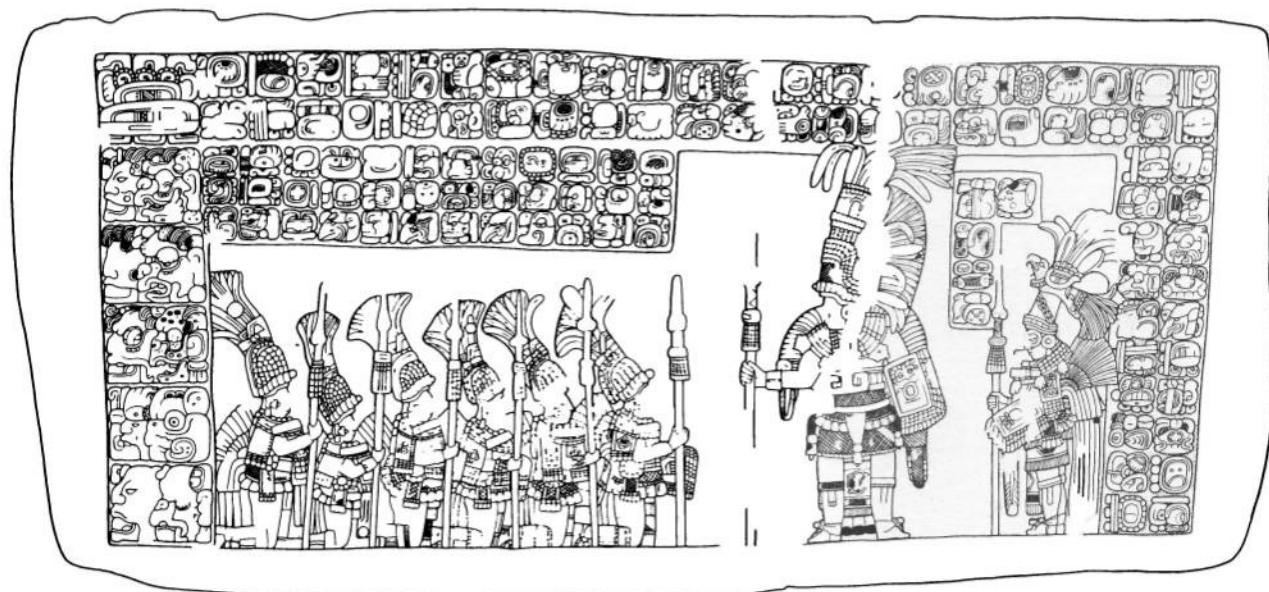


Fig. 11 Lintel 2, Piedras Negras. Drawing by David Stuart.

Lintel 2: Fur Wrist-band. Another noteworthy costume detail appears on Ruler 2's parallel portrait on Lintel 2 (DD 9.11.15.0.0, ca. A.D. 667). Hanging from his right wrist is a pendant object which I believe may be an animal tail (Fig. 10a)—the same kind of tail hanging from the pouch of the right-hand figure (Fig. 11). That the wrist-band tail has some specific role in this costume is suggested by Lacanja Stela 1, a warrior portrait also exhibiting considerable Teotihuacan influence. Attached to two *Spondylus* shells on the figure's wrist is a piece of fur that could well be another tail (Fig. 10b). In both examples the tail hangs on the wrist holding the staff, not the shield, which happens to be the figure's right hand.

Though I have not yet found an exact parallel to the wrist-band tail at Teotihuacan, the idea may still have sprung from that great northern site. Warriors from Portico 3 of the Atetelco compound carry a piece of fur in the same hand holding their *atlatl* darts (Fig. 10c). The Red Tlalocs Mural shows the same motif from another angle (Fig. 16). I think it plausible that the Lowland Maya wrist-band tail is related to the fur-in-hand motif at Teotihuacan. Furthermore, in both instances the context appears to be militaristic.

Post-Classic Central Mexican pictorial traditions show wrist adornments worn on one hand by figures in militaristic guises, often deities. Many times these consist of clusters of tails, seen, for example, in the Vaticanus B (Fig. 10d). As illustrated, the tails are accompanied by a row of paper strips. We are reminded of a description by Sahagún (1950–82: bk. 12: 51) of a dough effigy of Huiztilopochtli, the Aztec war deity par excellence: "And his left arm¹¹ band was hanging from his arm; it was composed of [strips of] coyote fur, and from it hung paper cut in strips."

¹¹ Dibble and Anderson's translation of *iopomacuec* as "left arm" might be more accurate as "left wrist." The word for "wrist" in Nahuatl is *maquechtli* (Molina 1970: 87).

The reference to coyote fur is intriguing. To the Aztecs the coyote represented their Chichimec roots. In early Colonial pictorials Chichimecs often wear shaggy coyote mantles or entire coyote skins, for example, in the famous Chicomoztoc scene of the *Historia Tolteca-Chichimeca* (Kirchhoff et al. 1976: fol. 16r). The connection is made especially obvious in the description of the coyote god Coyotl inauual, patron deity of the feather workers of Amantlan: "His shells, his rattles, they placed on his feet, and his yucca fiber sandals showed that he was one lately arrived, a newcomer. As they said, he was a Chichimec" (Sahagún 1950–82: bk. 9: 83). Coyotes also seem to have had some special association with warfare. Sahagún's (1950–82: bk. 11: 6–7) description of the coyote relates a tale in which the coyote befriends a warrior. In addition, the coyote appears as an emblem on Aztec shields.

Coyotes are commonly portrayed at Teotihuacan. Their identification is often ambiguous, but one signal is a tuft of fur at the jaw line, occasionally seen at the joints of the legs (e.g., Miller 1973: fig. 339). The texture of the fur is rendered in short linear strokes, and the overall appearance is scraggly. I think it possible that the fur carried by these Teotihuacan figures with *atlatl* darts is coyote fur, given its fluffy appearance. What the coyote meant to the Teotihuacanos is difficult to say. It may have been admired as a fierce hunter and thus took on military associations. Whatever its meaning, some part of the Teotihuacan coyote complex was transferred in the Early Classic to the Lowland Maya area. Hellmuth (n.d.: fig. 25) has suggested that the Lintel 2 kneeling warriors (Fig. 11) are also wearing tails, which pushes this trait into the Late Classic.¹² The

¹² Identifying the fur wrist band at Piedras Negras and Lacanja is difficult. The central spine with stiff bristling fur on Piedras Negras Lintel 2 (Fig. 10a) recalls tails seen on the Acanceh wall reliefs which have been identified as squirrel tails (Von Winning 1985). Isolated animal tails abound in the Acanceh scene and appear with a Teotihuacan-like glyphic element as a dominant motif of the murals. The tail motif seems to have been an important component of Teotihuacan transmissions in the Maya Lowlands.



Fig. 12 (a) Stela 8, Piedras Negras. Peabody Museum, Harvard University—photograph by Teobert Maler; (b) Detail of head-dress ornament from Stela 8.

Lowland Maya must have viewed the coyote as an exotic creature, emblematic of the distant north. Its non-regional flavor might suit its use as an insignia of a foreign power like Teotihuacan. It seems that even among the Aztecs, in whose territory coyotes would be more numerous, they still retained their affiliation with cultures outside of the Valley of Mexico.

Stela 8. The sequence of warrior stelae at Piedras Negras continues with Stela 8 (9.14.15.0.0, ca. A.D. 726), the portrait of Ruler 3 (Fig. 12). In its references to standard ruler costume, it diverges from the series. A typical God C loincloth is worn, in addition to a netted skirt.¹³ The head-dress with its serpent wing and mat symbol flanges is

¹³ Netted skirts are frequently, though not exclusively, worn by women. There remains the possibility that we see here a portrait of Lady Katun Ahau, the wife of Ruler 3, especially in light of the associated inscription (Stuart 1985).



Fig. 13 Stela 7, Piedras Negras (after Spinden 1957: pl. L, a).

traditional Maya costuming. However, the rosettes attached to a cluster of feathers in the upper headdress are clearly a Teotihuacan-derived motif (Fig. 12b). It combines the trapeze-and-ray sign with goggle eyes, symbolic notation of Tlaloc. The use of this Tlaloc rosette in headdresses also occurs in the Early Classic (Coggins n.d.: fig. 53b). The broad textile knee and ankle bands on Stela 8 are a Late Classic version of the furlike ones seen in the Early Classic and later at Chichen Itza. These are also found on Stela 7 (Fig. 11) in a form with pendant tabs that was popular in the Pasión (e.g., Fig. 15), at Naranjo (Stela 2: Graham and Von Euw 1975: fig. 13), and Copan (Stela 6: Maudslay 1889–1902, 2: pl. 105a; Hieroglyphic Stairway figure: Keleman 1943: pl. 87) on figures clearly displaying a Teotihuacan military costume.

Stela 7. Stela 7 (9.15.0.0.0? ca. A.D. 731) offers other unusual costume components, such as the feathered bib and lateral skull resting above the mask's bifurcated tongue (Fig. 13). The feathered bib occurs on two Naranjo warrior portraits, Stelae 11 and 21 (Graham and Von Euw 1975: figs. 33 and 53). The lateral skull also appears at Naranjo (e.g., Stelae 2, 7, 13, and 19; Graham and Von Euw 1975: figs. 13, 25, 37, and 49) as well as at other Maya sites, such as Caracol (Stela 5; Beetz and Satterthwaite 1981: fig. 6) and Tikal (Lintel 3, Temple I; Jones and Satterthwaite 1982: fig. 70). The bib and skull tie into militaristic themes in the Maya area, but they cannot be identified as Teotihuacan traits. The Teotihuacan "dripping fluid" sign occurs four times on Stela 7: below the great bifurcated tongue, on the



Fig. 14 Stela 9, Piedras Negras. Peabody Museum, Harvard University—photograph by Teobert Maler.

shield, in the trapeze-and-ray device over the headdress, and on the feathers covering the left shoulder. The latter is a profile view of the “dripping fluid” sign attached to a cartouche. The same motif is seen frontally on the feathered bib and shield. Frontal views of the cartouche and dripping fluid sign also occur in the center of the Balloon Headdress of Stela 9 (Fig. 14) and the loincloth of Stela 6, Copan. These examples show that the cartouche has three tight curls articulating its perimeter and is centrally divided by a horizontal bar also bearing a curl. Repeated so many times, this device obviously communicates an important idea for Stela 7, perhaps blood as an aspect of military conquest.

Stela 9. The last in the series, Stela 9 (9.15.5.0.0, ca. A.D. 736), the warrior portrait for Ruler 4, mixes imagery from its predecessors and in this sense is the most eclectic (Fig. 14). We see the Balloon Headdress and cotton neck piece of Stela 35 (Fig. 7). The trapeze-and-ray motif crowning the headdress (though here combined with a very Teotihuacan-looking frontal owl) and pouch with trophy head recall Stela 7. Another evocation of Stela 7 is the dripping fluid and cartouche insignia, here centrally placed on the Balloon Headdress. The flanges on the headdress and thin, tubular pectoral recall Stela 8. The flanges on Stela 9, however, utilize adjacent bands of motifs that reflect Teotihuacan geometrical patterns. The design is similar to the loincloth

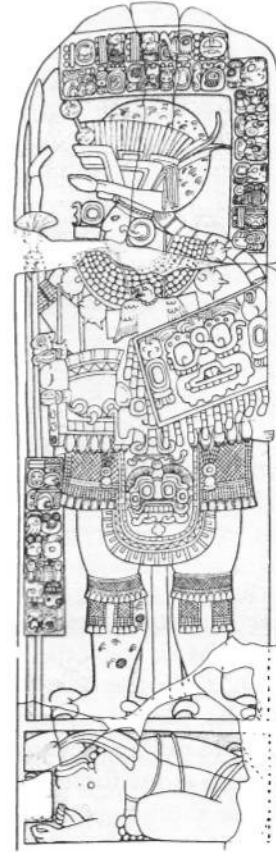


Fig. 15 Stela 2, Aguateca (after Graham 1967: fig. 5).

hem of the figure on Stela 2, Naranjo, a monument bearing many attributes of the Teotihuacan complex. On Stela 9, an unusual device, a complete rattlesnake, forms the interior border of the feathered flange. The Balloon Headdress, which is almost perfectly circular, is unusual as well in that it is ornamented with curious cleft-shaped spangles.

The Teotihuacan Military Costume and Political Expansion

This survey of Piedras Negras warrior stelae demonstrates a pervasive use of Teotihuacan-derived traits in these monuments. In fact, a comparison of the Early Classic Stela 31 figure (Fig. 2) with, say, Stela 7 from Piedras Negras (Fig. 13) shows as many Teotihuacan traits in the Late Classic monument, though a greater sense of distance from the original source. Yet the contemporary niche-figure stelae share none of these traits. Here, as at other Maya sites, the Teotihuacan pictorial complex is contextually circumscribed. Schele (n.d.a) proposes that the context revolves around blood sacrifice (warfare or autosacrifice) triggered by significant astronomical alignments, such as the first appearance of Venus as Evening Star, maximum eastern and western elongations of Venus, and stationary points of Jupiter. This revelation concerning the contexts in which Teotihuacan imagery occurs is extremely important, yet it does not explain why Teotihuacan traits should be emphasized.

I maintain that the political implications remain an important factor. Flooding a Maya monument with Teoti-

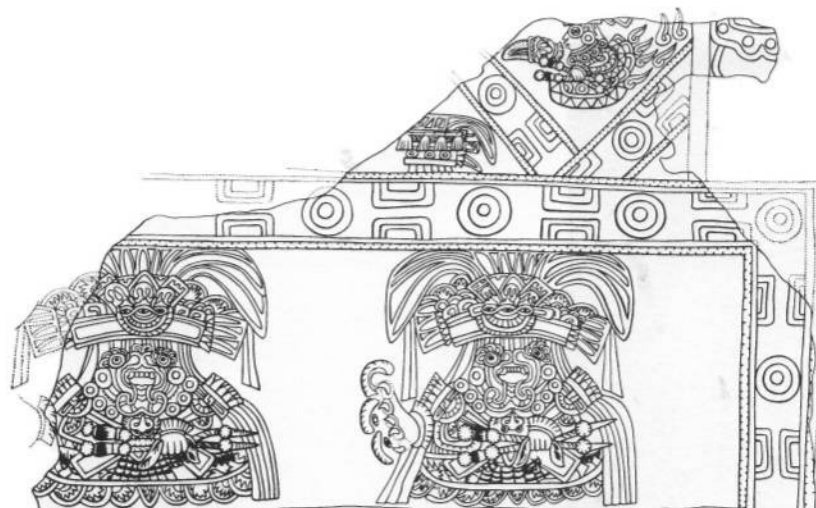


Fig. 16 Detail of Teopantitla Patio 9 (after Miller 1973: fig. 193).

huacan motifs has a connotative message based on the very presence of a non-Maya pictorial tradition. It is important to determine if Teotihuacan-derived pictorial elements continued to be viewed as external to Maya ethnic identity. After all, to call Teotihuacan motifs “non-Maya” after they have been in use for hundreds of years in the Maya area raises some thorny questions. But I believe their affiliation with an “outside” power, an idea that could be interpreted in a number of ways, was maintained right through the Post-Classic.

Surely this idea of external affiliation is true for the well-known stucco wall reliefs of Structure 5D-57 from Tikal, dating to the reign of Ruler A (Coggins n.d.: 453, figs. 98 and 99). Moreover, Coggins (n.d.: 393–395) notes strong similarities between these stucco reliefs and Piedras Negras military portraits in terms of their harsh frontality and shared Teotihuacan traits. Both Tikal reliefs portray a blocklike warrior whose entire costume reflects Teotihuacan influence both in style and content. One also presents a graceful, traditionally Maya-looking captive sitting in profile who sharply contrasts with the stiff, frontal warrior (Miller 1978: fig. 4). The contrast between Teotihuacan and Maya artistic sources is so thorough and deliberate here that one must assume full knowledge of the foreign appearance of this military portrait of Ruler A. Furthermore, both Tikal reliefs were created around A.D. 700, after direct trading contact between Teotihuacan and the Maya Lowlands had ceased or was on the wane. This “Teotihuacan revival” at Tikal was not stimulated by contact with Teotihuacan, but rather by political maneuvering on the part of Ruler A which involved renewing dynastic ties with Stormy Sky’s lineage and military aggression recorded on Lintel 3 of Temple I (Coggins n.d.: 390–395; Schele 1984: 24–25).

The Teotihuacan complex occurs sporadically at Maya sites in the Late Classic period. For the most part its appearance coincides with the reigns of particularly powerful and ambitious rulers. These include Ruler A of Tikal, Smoking Squirrel of Naranjo, Shield Jaguar and Bird Jaguar of Yaxchilan, Ruler 3 of Dos Pilas, and Chaan-Muan of

Bonampak.¹⁴ Many of these rulers engaged in military forays, and often that is when Teotihuacan traits make their appearance.

The implementation of the Teotihuacan military costume is tied to periods of political expansion and florescence of Late Classic Maya sites. I would posit that one use of the costume was as an ideological rallying point for political reorganization. Political factions or troops could be mobilized around a leader claiming a superior foreign pedigree, a type of disconnection strategy which supports political legitimacy and expansionist aspirations. A good case to observe is Dos Pilas Stela 16 and Aguateca Stela 2 (Fig. 15). Both are portraits of Ruler 3 of Dos Pilas who took command of the neighboring site of Aguateca by 9.13.0.0.0 (ca. A.D. 692) (Houston and Mathews 1985: 17).

¹⁴ Ruler A Tikal. Teotihuacan-influenced monuments: Lintel 2, Temple I, Lintel 2 of Temple II (wife?). Ruler A is responsible for much of the visible construction in the Great Plaza of Tikal, and his reign is often viewed as a political revival. Discussion of his militaristic exploits can be found in Coggins (n.d.: 391–392) and Schele (1984: 24–25).

Smoking Squirrel of Naranjo. Teotihuacan-influenced monuments: Stela 2. Smoking Squirrel and his mother, Lady Six of Dos Pilas, have by far the greatest number of monuments dedicated to them, totaling 12 (Closs 1985). War events from Smoking Squirrel’s youth are recalled on later monuments (Stela 23).

Chaan-Muan of Bonampak. Teotihuacan-influenced monuments: Stelae 2 and 3. His outstanding position in the history of Bonampak is attested to by the fact that he commissioned the bulk of the known architectural and sculptural monuments from the site, including the famous murals. Scenes of warfare abound during his reign, such as the carved lintels (Mathews 1980).

Shield Jaguar (I) and Bird Jaguar (IV) from Yaxchilan. Teotihuacan-influenced monuments: SJ Lintels 24 and 25; BJ Lintels 8, 17, and 41. In addition, the mother of Bird Jaguar, Lady Ik Skull, has a stela dedicated to her (now housed in Structure 21) with significant Teotihuacan influence. Their reigns represented a period of architectural and sculptural florescence at Yaxchilan. Militarism is rampant in texts and images.

Ruler 3 of Dos Pilas. Teotihuacan-influenced monuments: Stela 2. Aguateca, and Stela 16, Dos Pilas. For a discussion of political expansion at this time see Johnston (1985). It is unfortunate that we know little about the Piedras Negras rulers in question and their military exploits. One fact that is certain is that the persistence of sustained Teotihuacan imagery at Piedras Negras is the earliest and longest-lived of any Late Classic Maya site, lasting from about 9.9.15.0.0 to 9.15.5.0.0 (ca. A.D. 620–735). In contrast, the above-mentioned examples at other sites begin around Katun 13.

Not only did Ruler 3 exert political pressure on Aguateca, but he also initiated military action against Seibal around the same time (Johnston 1985: 53; Schele 1984: 27–28).

The portrait of Ruler 3 of Dos Pilas (Fig. 15) is laden with Teotihuacan attributes, many of which are shared with Piedras Negras: Balloon Headdress (here an unusual version based on a deer haunch) with trapeze-and-ray insignia, beaded collar fringed with *Spondylus* shells, fringed square shield, wrist pouch, and wide knee bands with pendant tabs. A Tlaloc mask floats in front of his face and embellishes his loincloth panel (see Berlo, Chap. 2, this volume, for a discussion of related face-fronting glyphs at Cacaxtla). Even the fringed jaguar mitts suspended around the neck may have a Teotihuacan source. A warlike deity with bifurcated tongue at Teotihuacan (also with a bird effigy necklace) wears a large, fringed feline paw mitt on his right hand (Fig. 16).

During this period of concentrated military aggression and political expansion in the Pasión River region, the ruler chose to identify with the Teotihuacan costume in a deliberate way. All of the evidence indicates that the choice was motivated by internal politics rather than influence from Teotihuacan. This fact dovetails with Schele's observation (n.d.a) that the first appearance of the costume, on Uaxactun Stela 5, is in the context of political domination of one site over another (Tikal over Uaxactun). At Dos Pilas, the costume may have invoked Teotihuacan as a mythical foreign power, just as the Itza and Toltecs were invoked in the Post-Classic.

It is significant that in the Terminal Classic Maya area, Teotihuacan attributes continue in areas where Putun incursions are thought to have occurred: Yucatan, Seibal, and the Chinkultic-Comitan region (see Kowalski, this volume). For example, Monument 18 from Chinkultic (Navarrete 1984: fig. 59) presents a figure wearing at his waist a zoomorphic head topped by a "mohawk" fringe and with scrolls replacing the lower jaw. This creature, often bearing goggle eyes, seems to be an important Late Classic version of Tlaloc and usually occurs in constellation with other Teotihuacan traits.¹⁵ On the Chinkultic stela the captive cowering at the figure's feet emphasizes a militaristic theme. On Stela 1 from Tenam Puente a typical wrist pouch bears a trapeze-and-ray insignia (Navarrete 1984: fig. 98). Stela 1 from Comitan with an associated date of 10.5.10.0.0 (A.D. 938) wears a garbled version of the Balloon Headdress and carries a spear. Many of these figures wear a horizontal nose bar, a trait found at Teotihuacan

¹⁵ Variation in the representation of this character, ranging from ophidian to unequivocal portrayals of Tlaloc, can be seen in a group of polychrome vessels illustrated by Robicsek and Hales (1981: 215–217). In this transformation the ophidian snout becomes a curving projection, sometimes fringed with feathers, attached to the pug nose of the Tlaloc face (Robicsek and Hales 1981: 217, table 16, d, e, and g). This form of the creature (goggle eyes, fringed volute attached to the nose, scroll lower jaw) appears often in Late Classic art, for example, as an offering lying on a bowl on the Jonuta Panel (Houston Museum of Fine Arts; Mayer 1980: pl. 38). On the New York Panel (Metropolitan Museum of Art; Mayer 1980: pl. 53), this scroll-jawed Tlaloc head ornaments a mosaic helmet offered to the Yaxchilan ruler Shield Jaguar II (Chelte). On the Copan Hieroglyphic Stairway, it appears prominently flanking the legs of the seated central figures (Keleman 1943: pl. 87).

(e.g., Séjourné 1966a: figs. 15, 37, 60) and in Early Classic Lowland Maya art with Teotihuacan influence, such as Stelae 31 and 32 from Tikal (Fig. 2 and Jones and Satterthwaite 1982: fig. 55a) and Yaxha Stela 11 (Greene et al. 1972: 342). Two altarlike sculptures from Tenam Rosario, situated southwest of Chinkultic, are particularly striking in their implementation of the Teotihuacan military costume. Each altar shows a frontal, squatting figure holding military gear—*atlatl* darts in one case and shield and spear in another. Present in their costume are rings around the eyes, furry wrist and ankle bands with pendant furlike elements, a nose bar, and the scroll-jawed Tlaloc mask mentioned earlier (Agrinier 1983: figs. II.7.5 and II.7.6). Ceramic analysis of this site shows a chronological delimitation to the Terminal Classic (Agrinier 1983: 242).

The Teotihuacan military costume is present in Late Classic Yucatan, such as the carved columns from Campeche previously mentioned. Art of Terminal Classic Yucatan also echoes Teotihuacan traits. Jambs from the Kodz Pop, Kabah (Pollock 1980: 372–373), show figures with goggle eyes and mosaic helmets brandishing *atlatls* and spears and taking captives. Proskouriakoff (1950: 120) compares these and other Yucatecan sculptures to the Piedras Negras warrior stelae in terms of their provincial style and sharing of specific costume elements. A lintel from Halal, Campeche, shows a figure with a goggle eye, mosaic headband, and pouch carrying a flint knife in his left hand (Pollock 1980: fig. 925).

Comparisons between Teotihuacan and Chichen Itza have long been noted by scholars, including Seler (1902–23, 5: 467) and Séjourné (1966b: 116–118). Tozzer's (1957) comparative illustrations of the Chichen Itza warrior sculptures reveal full awareness of the broad distribution of their costume through time and space, including Teotihuacan. Warrior figures which abound at Chichen Itza occasionally have goggle eyes, mosaic headdresses, back mirrors (Tozzer 1930: 156), carry pouches, square shields, *atlatls* and darts, and wear furry knee bands, all components of the Classic Teotihuacan warrior costume. Indeed, a comparison of a Chichen Itza warrior (Fig. 17) with the Stela 31 figure (Fig.



Fig. 17 Warrior from Chichen Itza, Temple of the Jaguars, Lower Chamber (drawn after Tozzer 1930: fig. 5).

2) shows extraordinary continuity in the specifics of the costume considering the four to five hundred years that separate them. Moreover, one cannot help but wonder if the fur garments worn on one arm so frequently at Chichen Itza, taking a variety of forms (Fig. 10e), are not related to the wrist-band tail at Piedras Negras or the piece of fur carried at Teotihuacan as a specific emblem of warriors.

One Teotihuacan costume element which is often overlooked in the art of Chichen Itza is the butterfly insignia worn as a pectoral (Fig. 17) or head ornament, also found at Tula and later in Aztec art. Berlo (1983) persuasively argues that the butterfly insignia is another Teotihuacan motif disseminated in Mesoamerica within the context of militaristic expansion. Moreover, she proposes that the militaristic association that the Aztecs saw for the butterfly (and presumably those at Chichen Itza felt similarly) has its roots at Teotihuacan. Seen in this light, the Tula and Chichen Itza warriors fit the Classic pattern of outfitting warriors with a Teotihuacan-derived costume, though with differences in style and certain selected motifs. The Tula-style warrior was later adopted by the Aztecs for representing their own warriors, including their war god Huitzilopochtli who was in a sense "disconnected" from ethnic groups in the Valley of Mexico by his affiliation with the Mexica proper and their period of migration (Nicholson 1971: 426).

WARFARE AND FOREIGNERS IN THE TERMINAL CLASSIC/POST-CLASSIC

Colonial writings that deal with Pre-Conquest history offer valuable insights into Maya attitudes toward foreigners in the Terminal Classic/Post-Classic period. Admittedly, European culture influenced such writings as the books of Chilam Balam and the Highland Guatemala "titulos"; nonetheless, one must assume that Pre-Columbian traditions have left a heavy mark. Given the internal inconsistencies and esoteric language of these documents, using them to piece together Pre-Conquest history is a task for the stout of heart. For my purposes I will leave aside such hornet's nests as "who did what to whom when" (see Ball, this volume) and rather try to glean information on the symbolic role of foreigners during this period of apparent political upheaval marked by the intermittent arrival of "Mexicans."

In reviewing Terminal Classic/Post-Classic Yucatecan history as seen in Colonial documents, one idea which emerges is that foreign identification in many instances seems formulaic and perpetuated for symbolic or political reasons. Nearly all (if not all) of the major political players in this period are identified as foreigners, most bearing the nebulous stamp of "Mexican." The case of the Itza, presumably the warriors represented at Chichen Itza, is well known (Thompson 1970: chap. 1). The memory of them as foreigners was vividly preserved into the Colonial period, even though they had ruled and lived in Yucatan for hundreds of years. Ralph Roys, in his commentary on the Chilam Balam of Chumayel, was struck by the curiosity of this fact (1967: 84, note 1).

The characterization and political role of the Itza is of an extremely contradictory nature. They are pictured at times

as lewd ruffians (Roys 1967: 178; Tozzer 1957: 11, 46) and are bitterly maligned: "They twist their necks, they twist their mouths, they close their eyes, they slaver at the mouth" (Thompson 1970: 21). Yet the Itza are still eulogized as valiant and wise (Tozzer 1941: note 123; Roys 1967: 178) and formed a powerful dynasty with which other political factions desired affiliation.

In addition to such contradictions, there is a strong element of mythology surrounding the Itza. They are identified with the western land Zuyua or Zuiva, a mythical homeland claimed by many peoples in the Post-Classic. The Quiche and Cakchiquel called it Tollan Zuiva, and it is described by the couplet phrase, "seven caves, seven ravines," an expression paralleling the Central Mexican concept of Chicomoztoc, "seven caves" (Heyden 1975). In the Chilam Balam of Chumayel the Itza are called the Zuyua people (Roys 1967: 164). When they occupy Chichen Itza, they are said to arrive from four directions (Roys 1967: 139-140), surely a cosmological reference. Some of their leaders bear Nahuatl-derived names, such as Naxit Xuchit (Thompson 1970: 14), but others, like Kakupacal, have pure Maya names (Kelley 1968: 262), lending more than a degree of confusion as to who these people were. Moreover, these apparent mythological elements—association with Zuyua, migratory patterns, etc.—form a kind of blueprint for other groups claiming "Mexican" pedigree in the Maya area.

The Itza were ousted from Chichen Itza by one Hunac Ceel who was the ruler of Mayapan (Roys 1967: appendix C). Though his name is Yucatec, he was also regarded as "Mexican" and may himself have been a Putun-Chontal Maya (Thompson 1970: 16-17). His conquest was aided by "seven foreign Mexican captains" with Nahuatl names (Roys 1967: 177-178).

After the flight of the Itza from Yucatan to Lake Peten Itza, the Cocom came into power at Mayapan. Based on a statement by Torquemada that the Cocom descended from Kukulcan who came from the west, Roys (1967: 194) states that the Cocom too were a "Mexican" family. Their period of rule collapsed because the Cocom governor invited in "Mexican" mercenaries whose barbarities precipitated a civil war. In Landa's words (Tozzer 1941: 32, 35):

The Governor Cocom began to covet riches and for this reason he arranged with the troops of the garrison, which the kings of Mexico kept at Tabasco and Xicalango, to hand over the city to them. And thus he brought the Mexican people into Mayapan, and oppressed the poor and made many slaves, and the lords would have put him to death but for the fear they had of the Mexicans.

The unpopular behavior of the Cocom and their foreign troops prompted the Tutul Xiu to sack the city, causing the demise of Mayapan. The Tutul Xiu follow similar patterns of foreign identification as the Itza. According to the Chilam Balam of Mani (Barrera Vásquez and Morley 1949: 26), the Xiu came from West Zuyua, Nonoalco, and a place called Tulapan Chiconathan (which sounds suspiciously like Tula) and arrived in Yucatan after a long period

of migration (four katuns and one tun; Roys 1962: 73). Like the Itza, their members bear both Nahua and Maya names.

The "Mexican" mercenaries of the Cocom, the Ah Canul, are thought to have come from the Tabasco area. That they were deeply associated with warfare is seen in Landa's comment that they are said to have introduced the use of arms into Yucatan (Tozzer 1941: 35), a statement surely propagated by legend rather than fact. Ah Canul surnames are largely Maya sprinkled with a few Nahua lexemes, such as Ah Itzam Kauat (*coat*) (Barrera Vásquez 1957: 31). The surname Dzul (*ts'ul*), meaning "foreigner" in Yucatec (Barrera Vásquez 1980: 892), is carried by some Ah Canul such as Ah Ceh Dzul (Barrera Vásquez 1957: 93). The Ah Canul seem to identify themselves with the Itza (Tozzer 1941: 33). The *Cronica de Calkini* states that the Ah Canul established themselves in Itza cities when they left Mayapan (Barrera Vásquez 1957: 31). Like the Itza, the Ah Canul are said to speak brokenly (Roys 1967: 74). They also identify their origins with Zuyua. One passage from the *Cronica de Calkini* is particularly interesting in terms of Ah Canul origins. As people from the east they describe themselves as "Maya men"; yet they are also identified with the people of West Zuyua.¹⁶ The document also states that the people of the name Ah Canul came from Lake Peten Itza, the home of the Itza, an odd statement considering their supposed Tabasco origins. Their migratory patterns seem to be based on an Itza prototype.

What arises here is the curious admixture of people seeing themselves as Maya and at the same time as foreigners in the likeness of the Itza. Similarly, in the Chilam Balam of Chumayel, the Maya address themselves as "Itza" in prayer (Roys 1967: 148, 150, 151, 168); yet the Itza are maligned and characterized as foreigners in this document.

The Chilam Balam of Chumayel also illustrates that foreign identification was invoked in Yucatan for the maintenance of descent lines in the so-called "Interrogation of the Chiefs." This esoteric questionnaire, couched in the language of metaphor (Stross 1983), was administered at the beginning of every new katun to political leaders as a kind of litmus test of legitimacy (Roys 1967: appendix C). That the questionnaire is associated with the "foreign" Itza dynasty is seen in the fact that it is called the Language of Zuyua, Zuyua being closely identified with "Mexican" intruders, and in Yucatan especially the Itza. Foreign affiliation channeled through the Language of Zuyua socially segregated elite lineages from the masses or competing lineages as a means of supporting political legitimacy. Such a strategy of political domination is a prime example of social disconnection through foreign affiliation. As the foregoing discussion illustrates, *claims* of foreign affiliation were a favored form of propping up elite hierarchies in Yucatan from at least the Terminal Classic. Even after the Conquest, the Yucatec Maya, as other groups in Mesoamerica, were quick to adopt emblems of imperial Spanish

rule, such as royal crowns and the Hapsburg eagle, to represent indigenous notions of supreme authority.

The association of the Quiche and Cakchiquel ruling elite with "foreign" sources of power occurs repeatedly in Early Colonial native language documents. As with "Mexican" intruders in Yucatan, these foreigners are often said to come from the mythical land Zuyua, usually described as Tollan Zuyua.¹⁷ "Toltec" lineages in the Highlands formed an elite warrior class and enjoyed social, material, and political prerogatives. Brown (1985: 280) suggests that the Toltecs invoked by the Quiche elite actually may have been Teotihuacanos preserved in local memory for the prosperity their presence bestowed upon the region.

Though cast in an aura of "Mexican" respectability, foreign elites who lent legitimacy to ruling dynasts were often located in neighboring regions. For example, in their investiture to office, Cakchiquel lords made a pilgrimage to receive the blessing of a powerful overlord named Nacxit who lived in Pokom country (Miles 1957: 743), "foreign" territory to the Cakchiquel. Miles (1957: 751) observes that "Nacxit as a title associated with ruling power was widespread in the Maya-speaking area." Nacxit is a Nahua name, appearing in the Chilam Balam of Chumayel as Nacxit Xuchit. Roys (1967: 83) states that this was one title for Quetzalcoatl.

In sum, Terminal Classic/Post-Classic political events show that foreign identification was fostered, if not exaggerated, in official histories. For political purposes, foreign identification could be an asset, and its pedigree could be assumed in a formulaic way. I am not debating whether real foreign invasions underlie some or all of the events recorded in Colonial documents. To illustrate my point, it is enough that foreign affiliation was claimed, for I see this issue largely in terms of ideological manipulation rather than historical events. It seems evident that the foreign pedigree was cultivated by the ruling elite in a way that reveals a more fundamental attitude toward warfare, rank, and political power, one which I believe stretches back into the Classic. Warlords of "foreign" pedigree form exclusive dynastic lines. Rank differentiation and political legitimacy are achieved through claimed affiliation with prestigious foreign polities or even the memory of such polities. The Language of Zuyua is an excellent case in point in the Maya area. Furthermore, foreigners who provide political legitimacy could be external only in a regional sense, rather than a more drastically different ethnic one. However, the trappings which cast them as foreign—costume, titles, insignia—may derive from an ethnically distinct group which enjoys cultural dominance or did so in the past.¹⁸

¹⁷ Native Highland documents which place the origins of their ruling lineage with Tollan in the west include the Popol Vuh, Título de Totonicapán, Título Tamub, Título C'oyoi, Título Zapotitlán, and the Annals of the Cakchiquels (Carmack 1973: 24–50).

¹⁸ An interesting parallel to usage of foreign pictorial elements in the Maya area appears in the Mixtec codices. Pohl (n.d.: chap. 3) has identified a group of figures, led by an individual named 4 Jaguar, who wear costume elements of Central Mexican deities, such as Tezcatlipoca, Camaxtli, and Xipe Totec. He interprets these Central Mexican pictorial references as an attempt to show non-Mixtec ethnic identity, perhaps

¹⁶ Roys' (1962: 36) translation is: "We know how it was that we came from the east, we, Ah Maya men, when they came, Ah Chickin Suyuab [the west Suyua people]. . . ." Cf. the same passage in Barrera Vásquez (1957: 107).

CONCLUSION

Elites in the Terminal Classic/Post-Classic period proclaim their foreign affiliation in a highly formulaic manner suggesting a deeper ideological basis for such claims. The ethnohistorical evidence suggests that warfare and exclusive dynastic ties lie at the heart of this issue. Since these are primarily the contexts in which Teotihuacan elements appear in Classic Maya monumental art, an analogy with Terminal Classic/Post-Classic history seems warranted. In the Early Classic and part of the Late Classic, the Teotihuacanos were most likely the foreign elites with whom the Maya associated themselves, naturally using their costume and insignia to make this statement. After the fall of Teotihuacan, ca. A.D. 750, the target reference for the costume must have changed to whoever filled the power vacuum at that time—the Itzas, the Toltecs—but the costume and symbols, alluding to a great foreign power, retained much of their original form and general meaning. A major question remains: at what point did the Itza come to be associated with the Teotihuacan military costume in the Maya area? Its revival in the Late Classic Maya area geographically aligns with trade routes which may have been taken over from Teotihuacan by the Itza (see Ball, this volume). I suspect that this trade connection vis-à-vis the Itza may shed light on the artistic parallels between Piedras Negras and the Northern Maya area.

The Late Classic material may also provide evidence of “foreign” mercenaries aiding the exploits of a powerful lord. Piedras Negras Lintel 2 (Fig. 11) presents figures laden with Teotihuacan military attire, including Teotihuacan symbols on their paneled collars. Schele and Miller (1986: 136) astutely observe that two-column captions name the six kneeling figures and associate them with emblem glyphs from Yaxchilan, Bonampak, and Lacanja, none of which sites were dominated by the Piedras Negras sphere of influence (Mathews 1985: 33). I interpret these men as warriors and the scene as that of a powerful ruler surrounded by “foreign” (in this case meaning nonlocal) mercenaries. The use of a Teotihuacan “foreign” costume would suit such an occasion. All of the secondary figures add up to seven, which recalls the “seven Mexican captains” of Hunac Ceel (though the extreme right-hand figure carries the Piedras Negras emblem glyph).

Teotihuacan iconography is also called into play when the issue of exclusive dynastic ties looms important. This theme accounts for many of the nonmilitaristic images with Teotihuacan influence, such as Stela 40 from Piedras Negras (Fig. 18). The lower female figure of exaggerated size, indicating some supranormal status, wears a mosaic zoomorphic headdress. She may be the deceased mother of Ruler 4 who is portrayed above, or perhaps she is a more ancient ancestor. Her wearing a “foreign” Teotihuacan-derived headdress

Toltec. He believes, however, that these people came from the Mixteca Costa in an area where Toltec heritage was claimed. In the codices, Mixtec kings like 8 Deer seeking royal legitimacy (though in fact newcomers to power) align themselves with prestigious “Toltec” functionaries and participate in Central Mexican rituals in order to create a royal bloodline.

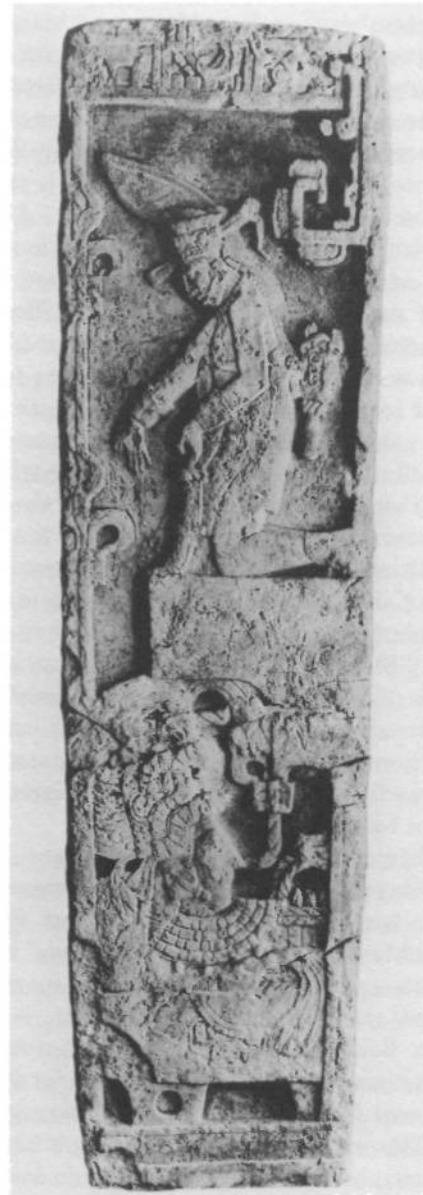


Fig. 18 Piedras Negras Stela 40 (after Morley 1937–38, 5: pl. 135b). Courtesy of the University Museum, University of Pennsylvania.

addresses a desire for exclusive dynastic ties, a visual counterpart to passing the test of the Interrogation of the Chiefs. Similarly, on Copan Altar Q (Maudslay 1889–1902, 2: pl. 92) Yax K'uk' Mo'o, the lineage founder of Copan (Schele n.d.b), wears Tlaloc “goggles” around his eyes. I interpret this image in a parallel fashion to Stela 40—the inclusion of “foreign” pictorial elements in the portrait of the founder of the ruling lineage proclaims an exclusive dynastic heritage, again an instance of social disconnection.

Placed side by side, a Piedras Negras warrior stela and a niche-figure stela show the “many hats” worn by Maya rulers. In the niche-figure stela we see a man of the people, assuming a nurturing, self-sacrificial role aligned with the cosmic structure (Fig. 1). As a conquering warrior, the figure is torn from the nurturing social fabric and placed in

the rarefied atmosphere of the military elite. Unlike the former example, there is no cosmic frame to bring in a normative view of things. Like their elite counterparts in other parts of the world, the Maya consciously implemented local and foreign pictorial traditions as a way of manipulating rank relationships. The two types of sculptures at Piedras Negras analyzed here exemplify this point. As a means of assuming the pedigree of an outside, dominant power—to disconnect the rank of local nobility from those around them—the Teotihuacan military costume formed a template in the Early Classic and left a long-lived, rich legacy in the remaining history of Mesoamerica.

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Who Am I among the Itza?: Links between Northern Yucatan and the Western Maya Lowlands and Highlands

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"Behold! Who am I said to be among men? . . .

Who am I among the people of the Putun?"

The Book of Chilam Balam of Chumayel,

Chapter XII (A Song of the Itza) (Roys 1967: 115)

THIS PAPER PRESENTS EVIDENCE that during the Terminal Classic period (ca. A.D. 790–909) strong connections existed between northern Yucatan (most specifically the site of Chichen Itza), the site of Seibal in the Pasión drainage of Guatemala, and several sites in the Comitán Valley of Chiapas and the adjacent Chaculá district of Guatemala. Combined epigraphic, architectural and artistic data make it clear that these connections involved more than vaguely defined "influences," but were the result of movements of factions of a single ethnic group (the Chontal Maya, also known as the Itza), and that there were sustained interregional contacts among members of this group during the time in question. In addition, it will be shown that these ethnic incursions can best be understood as an attempt to effect a political consolidation of key trading networks between the Maya area and Central Mexico.

Various connections between Seibal and Chichen Itza have been pointed out before. J. E. S. Thompson (1970: 41–45), for example, noticing the shared use of figures with darts and *atlatl* (and/or fending stick) and other "non-Classic" features in the art of the two sites, suggested that both were occupied during the Terminal Classic period by factions of Chontal (or Putun) Maya groups whose original homeland lay along the Gulf Coast in eastern Tabasco and southwestern Campeche.¹ Joseph Ball (1974: 88) and John

Graham (1973: 213) have also pointed out strong relationships between Seibal and northern Yucatan, and have asserted that the Seibal intruders' base of operations was in the latter area.

An important monument for confirming and clarifying the ties between the northern lowlands and the Pasión River region is Seibal Stela 1 (Fig. 1). Stela 1 was erected in A.D. 869 (10.2.0.0.0 3 Ahau 8 Cumku in the Maya Long Count) and includes many "non-Classic" stylistic features, such as the standing pose with both feet facing the same way.² The stance is reminiscent of those portrayed on various Terminal Classic monuments from northern Yucatan, such as the Halakal Lintel (Proskouriakoff 1950: fig. 104b), or the "Maya" figures from the Chacmool Temple or the Northeast Colonnade at Chichen Itza (Fig. 2). The knotted cloth gaiters worn by the figure on Stela 1 resemble those seen on several late monuments from the northern lowlands, including Edzna Stela 5 (Proskouriakoff 1950: fig. 291'), the Mul-Chic murals (Barrera Rubio 1980: figs. 1–3), and the Chacmool Temple at Chichen Itza (Proskouriakoff 1950: fig. 29j) (see also Fig. 3).

The figure depicted on Stela 1 wears a headdress composed of four knotted serpents, a hand with "checker-board" design on the palm, and a peculiar long-necked bird. The bird has an elongated beak, and the wing seems to be composed of an oval cartouche containing a *kin* sign

I would like to express my appreciation to Dumbarton Oaks for enabling me to participate in the 1984 summer seminar "Cultural Adjustments in Mesoamerica after the Decline of Teotihuacan," and to thank the Director of Pre-Columbian Studies, Elizabeth Boone, and my colleagues and office-mates, Richard Diehl, Joseph Ball, Ellen Baird, and Janet Berlo, for providing encouragement and for fruitful discussions concerning transitions in art and culture during the time period covered in this volume. In addition to many other scholars with whom I have discussed the evidence presented in this paper, I would particularly like to thank Clemency Coggins and Linnea Wren for supplying me with unpublished papers pertinent to arguments presented herein.

¹Sharer (Morely, Brainerd, and Sharer 1983: 136–138, 158–159, 308–

310) discusses these connections and also asserts that Seibal's Terminal Classic rulers stemmed from Chontal territory in Tabasco and southwestern Campeche. Ball and Taschek (this volume) distinguish between "at least two linguistically and politically divergent groups," both of whom are referred to in the Colonial Yucatec sources as "Itza." The Itza group discussed in this paper is that which occupied the "coastal plain-and-range area at the southwestern base of the Yucatan peninsula."

²All dates are expressed in terms of the Goodman-Martínez-Thompson correlation of the Maya and Christian calendars, in which the date 11.16.0.0.0 in the Maya Long Count falls in the year 1539.



Fig. 1 Seibal Stela 1 (after Maler 1908: pl. 3-1).

topped by three pointed objects which are probably best interpreted as flint lance points (Fig. 3a). The only other known occurrence of this specialized bird iconography is on two monuments at Chichen Itza. A similar supernatural bird with *kin* glyph and flint blades on the wing appears on the front of Lintel 1 of the Temple of the Four Lintels and on the front of Yula Lintel 1 (Beyer 1937: pls. 7a, 11a) (Fig. 3b, c). The probable date for Yula Lintel 1 is 10.2.4.8.4 8 Kan 1 Pop (A.D. 873), while two dates of 10.2.12.1.8 9 Lamat 11 Yax and 10.2.12.2.4 12 Kan 7 Zac (A.D. 881) are associated with the Temple of the Four Lintels (Kelley 1982: 12). Kelley (1964; 1982: 7) named this mythological bird "Knife-Wing," and has pointed out that the Chichen Itza depictions show the bird with a moon sign on the other wing and a human face in the beak.

The appearance of the peculiar "Knife-Wing" bird in the headdress of the figure on Seibal Stela 1 is particularly important because in addition to being a localized iconographic motif at Chichen Itza it also was used as a personal name in that site's inscriptions. The historical figure whom Davoust (1980: 26-27) called "Ac Muluc Tok," and whom Kelley (1982: 7, fig. 3) designated as "Knife-Wing," has a name glyph that includes either a flint blade or, substituting for the flint blade, a wing with flint blades³ (Fig. 4a-c).



Fig. 2 "Maya" figure from Northeast Colonnade, Chichen Itza (after Proskouriakoff 1950: fig. 107a).

References to "Knife-Wing" are concentrated on the lintels from Yula and the Temple of the Four Lintels, where they are associated with the related iconographic motif.

Since the shared use of the "Knife-Wing" bird is such a striking iconographic parallel, and since the figure portrayed on Seibal Stela 1 shares many other features with the monuments of northern Yucatan in general and Chichen Itza in particular, it seems likely that the Seibal personage belonged to the same ethnic group responsible for the Terminal Classic and Early Post-Classic monuments at Chichen Itza. Furthermore, because there are earlier examples known in which Maya rulers displayed their name glyphs in their headdresses (e.g., the Tikal ruler "Stormy Sky" on Stela 31) (Morley, Brainerd, and Sharer 1983: 110, fig. 4.11), it seems possible that we have a later example of this practice on Seibal Stela 1, and that the references to the historical figure named "Knife-Wing" in the Chichen Itza inscriptions refer to the figure portrayed at Seibal.

Many other close correspondences exist between the art

³This figure has been identified by tying his name to those of other recognized historical names in the Chichen Itza inscriptions by means of relationship glyphs. The relationship sequences suggest that "Knife-Wing" may have been a son of the figure called "Kin-Cimi," who was in turn related (perhaps as a stepbrother) to Kakupacal (Kelley 1982: 6).

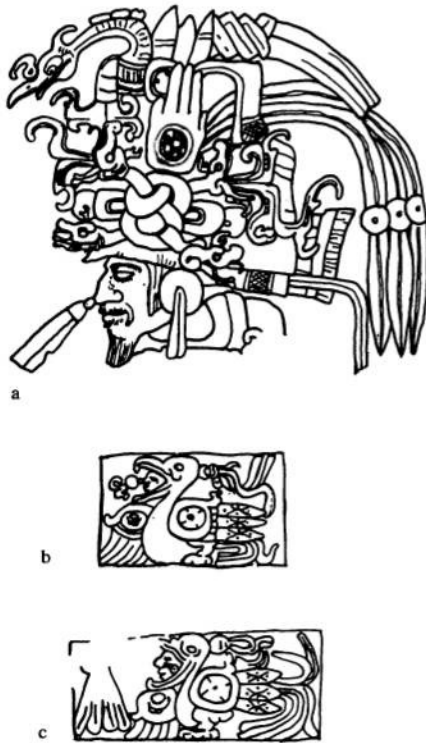


Fig. 3 (a) Seibal Stela 1, detail of figure's headdress (drawing after Maler 1908: pl. 3-1). "Knife-Wing" birds from Chichen Itza; (b) Lintel 1, Temple of the Four Lintels, (c) Yula Lintel 1 (drawings after Kelley 1982: fig. 4).

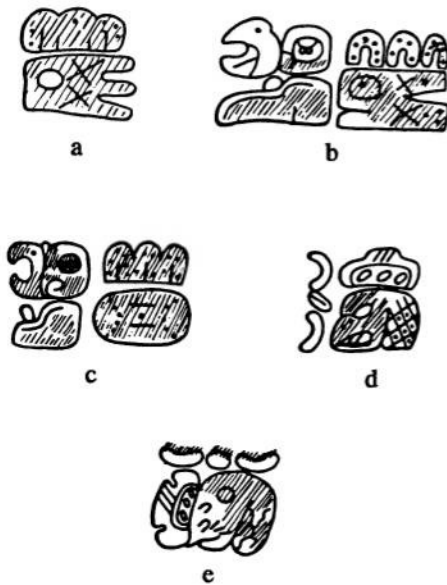


Fig. 4 Selected variants of the names "Ac Muluc Tok" or "Knife-Wing" (a-c) and "Yax T'ul" (d-e) at Chichen Itza (after Beyer 1937: figs. 172, 174, 178, 131, 132).

and architecture of Seibal and Chichen Itza. A. L. Smith (1982: figs. 80, 122-124) has pointed out close similarities among the two Seibal ball courts, Structures A-19 and C-9, and two at Chichen Itza, the Monjas Ball Court (Str. 2D9) and the Red House Ball Court (Str. 3D4) (Ruppert 1952: 25, 62, figs. 16, 39, 151). Both of the Seibal courts were

constructed during the Terminal Classic period (Smith 1982: 80-82, 161). They share with the Chichen examples broad sloping benches, vertical playing walls, and large end zones (Smith 1982: 240). The Seibal ball courts also resemble that at Uxmal, the hieroglyphic rings of which suggest a date of 10.3.15.16.14 (A.D. 905) (Kelley 1982: 15). Although Cohodas (1978: 90) has suggested that the Red House Ball Court at Chichen Itza underlies the Red House (for which a date of 10.2.0.1.9, A.D. 869 is probable) (Kelley 1982: 14, and personal communication), careful examination indicates that it more likely was constructed at the same time as or somewhat after the Red House, and thus corresponds roughly in time with the courts at Seibal and Uxmal.⁴

In addition to the architectural likenesses among the ball courts, there are also costume similarities between the Chichen ball court figures and figures at Seibal. Both the figures of the Monjas Ball Court and those of the Great Ball Court at Chichen Itza wear a distinctive sandal on one foot (Fig. 5a, b). This sandal type covers the foot completely and is subdivided by a series of vertical lines. Virtu-

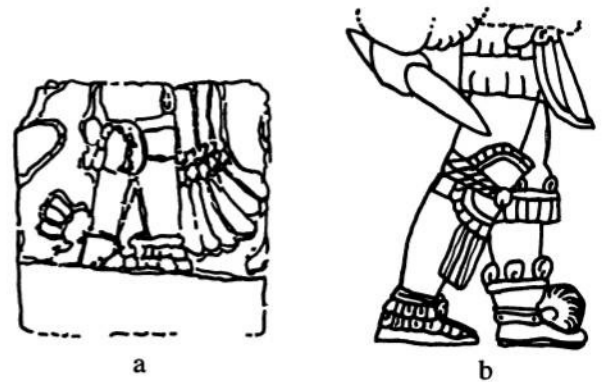


Fig. 5 Distinctive ball game slipper type at Chichen Itza: (a) detail of figural relief sculpture from the Monjas Ball Court, showing slipper sandal (drawing after Bolles 1977: 228), (b) detail of figural relief sculpture from the Great Ball Court (drawing after Proskouriakoff 1950: fig. 106c).

ally identical slipperlike footgear is worn by the figure on Seibal Stela 14 (Fig. 6), which has been assigned a stylistic date of A.D. 870 by John Graham (Greene, Rands, and Graham 1972: 278, pl. 112). The Seibal figure also holds an elaborate axe that seems closely related to the axelike, vestigial versions of the manikin scepter held by the "Maya" figures on the south bench of the Chacmool Temple at Chichen Itza⁵ (Fig. 7). Somewhat similar axes are

⁴Coggins (Coggins and Shane 1984: 157) places the mural paintings in the Upper Temple of the Jaguars of the Great Ball Court of Chichen Itza at A.D. 850. By implication, the court itself would be of earlier 9th-century date. Wren (n.d.: 14), however, noting hieroglyphic parallels (including a possible reference to the figure Kakupacal) between the inscription on the "Great Ball Court Stone" and the inscriptions on several of the Chichen Maya lintels, suggests that the "Great Ball Court stone and the structures of the Great Ball Court complex can be dated to approximately 10.2.0.0.0-10.3.0.0.0 (869-889)." Thus the Great Ball Court also may correspond roughly in time to those of Seibal and Uxmal.

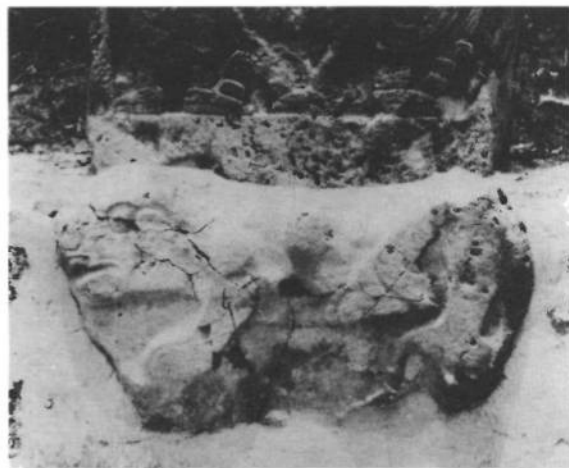
⁵See Morris, Charlott, and Morris 1931, 1: fig. 218, b-d; 1931, 2: pls. 50, 116.



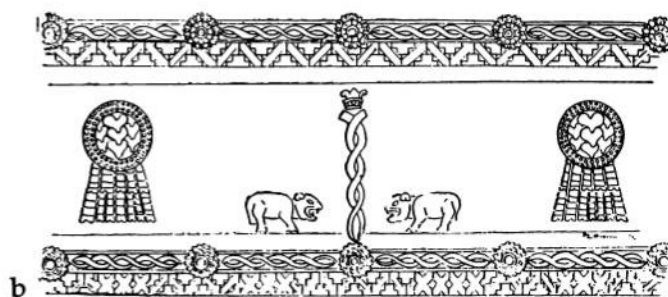
Fig. 6 Seibal Stela 14 (after Greene, Rands, and Graham 1972: pl. 112).



Fig. 7 "Maya" figure on south bench mural of Chacmool Temple, Chichen Itza (after Roys 1967: fig. 2, with additions after Morris, Charlot, and Morris 1931 by Kowalski).



a



b



c

Fig. 8 Prowling jaguar relief sculptures: (a) on face of altar platform of Seibal Stela 17 (after Smith 1982: fig. 92c), (b) on upper facade of the Inner Castillo, Chichen Itza (after Erosa Peniche 1946: 12), (c) from Atasta, Tabasco (after Berlin 1956: fig. 7g).

held by the ruler "Lord Chac" on Uxmal Stela 14 (ca. A.D. 900) (Fig. 19) and by several of the figures in the Mul-Chic murals (Barrera Rubio 1980: figs. 1, 2). Moreover, the Seibal figure's mosaic collar is composed of small plaques with circular centers and has a tabbed fringe. Comparable collars are worn by the "priest" figures on the south bench of the Chacmool Temple (Morris, Charlot, and Morris 1931, 2: pl. 133, figs. VIII-XI).

Other "non-Classic" features of the architecture and architectural sculpture of Seibal comparable to those of Chichen Itza include the presence of radially symmetrical



Fig. 9 Sacchana (Quen Santo?) Stela 1 (after Seler 1901: fig. 5).

pyramid temples, prominent round structures, prowling jaguar figures (stucco sculpture on the stela platform of Stela 17 at Seibal, Inner Castillo, and Upper Temple of the Jaguars at Chichen Itza) (Fig. 8a, b), and the use of three-part *atadura* or binder moldings (Smith 1982: 239–240).⁶

There is strong evidence that members of the same ethnic group who dominated Chichen Itza and Seibal during the Terminal Classic period also pushed up the Lacantun River and its tributaries and settled at the sites of Quen Santo and Uaxac Canal in the Chacula district of Guatemala. At Sacchana, Chiapas, two carved monuments with Cycle 10 dates have been found⁷ (Figs. 9, 10). Although these are referred to as Sacchana Stelae 1 and 2, Seler (1960, 2: 251) says that the monuments were taken from the archaeological site of Quen Santo and brought to the Hacienda Sacchana. One of these, Stela 1, has a clear Initial Series date of 10.2.5.0.[0 9 Ahau 18 Yax] (A.D. 874).⁸ Stela 2 has an Initial Series date of 10.2.10.0.0 2 Ahau 13 Chen (A.D. 879). The katun glyph is broken off, and several of the other Initial Series glyphs are weathered, but enough remains to confirm the placement.⁹ This stela is particularly important because the inscription on the rear contains a glyph consisting of “jawbone” (T590) and “longbone” (T110) elements at B2. This glyph is the same as that which Beyer (1937: figs. 99–102, 104–105) identified on several monuments at Chichen Itza. In addition, Coggins (n.d.: 9–10) has pointed out that the glyph at C2 is apparently composed of a Yax (T16) prefix and a rabbit head (T759), a

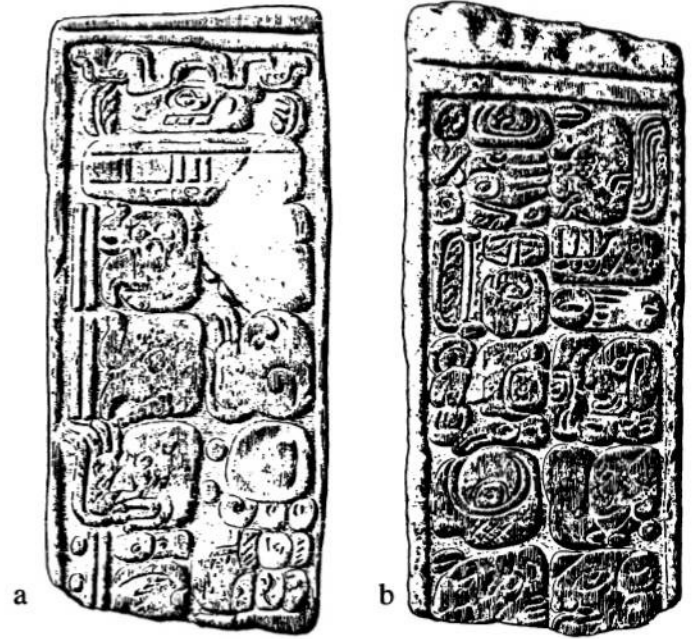


Fig. 10 Sacchana (Quen Santo?) Stela 2 (after Seler 1901: figs. 6, 7), (a) front, (b) rear.

combination that also occurs prominently in the Chichen Itza inscriptions.

Recently Davoust (1980: 25–26) has suggested that the Chichen examples are the name glyphs of Chichen rulers, whom he designates as “Jawbone-Longbone” and “Yax T’ul.” The monuments on which the “Jawbone-Longbone” name occurs include Lintel 4 and 4A of the Monjas (A.D. 880) (Fig. 11), the Initial Series Lintel (A.D. 878), the One Lintel, the Halakal Lintel, the Caracol Stela, and Block 11 of the Caracol Frieze. Two of these monuments seem to indicate a close connection between “Jawbone-Longbone” and the figure “Kakupacal.” David Kelley (1968; 1982) has demonstrated that a certain sequence of glyphs (T669.604:586:25:178) should be read phonetically as Kakupacal (seen at position Y3 in Fig. 11). Since Kakupacal was the name of a prominent leader of the Itza mentioned in several northern Maya ethnohistoric sources, Kelley (1976: 242) reasoned that this must be a historical name. Kakupacal is mentioned fourteen times in the texts at Chichen Itza (Kelley 1976: 240–242), and, with one possible exception, the dates associated with him fall within a twelve-year period from 10.2.0.1.9 to 10.2.12.2.4 (A.D. 869–881) (Kelley 1976: 242; 1982: 14). On Lintel 4 of the Monjas (A.D. 880) Kakupacal’s name (at Y3) follows that of “Jawbone-Longbone” (at E3), while on Lintel 3 of the Monjas the same relationship exists between Kakupacal’s name (at Y3) and that of a woman designated as “Lady Kuk” (at D1–E2) by Kelley (1982: 6). Kelley (1982: 6) has suggested that “Jawbone-Longbone” and “Lady Kuk” are named as the father and mother of Kakupacal on these two lintels, and this is supported by the presence of a kinship glyph (T229:23) known to name a mother-child relationship (Mathews 1980: 61) standing between the name of Lady Kuk and that Kakupacal at E4 on Lintel 3. On the Initial Series Lintel (A.D. 878) the name of

⁶Radially symmetrical temples: Structure A-3 at Seibal, Castillo at Chichen Itza. Prominent round structures: Structure C-79 at Seibal, Caracol at Chichen Itza. *Atadura* or binder moldings: Structures A-14 and C-18 at Seibal, various structures at Chichen Itza and throughout the Puuc region.

⁷These were first published by Seler (1901: figs. 5–7). See also Seler (1960, 2: figs. 4–5), Blom and La Farge (1927: 435), and Mayer (1978: pls. 10–11).

⁸The variable element of the Initial Series Introductory Glyph is the Venus sign, that of the month Yax (Thompson 1960: fig. 22:59).

⁹The variable element of the Initial Series Introductory Glyph is the moon sign, indicating the month Chen (Thompson 1960: fig. 22:59).

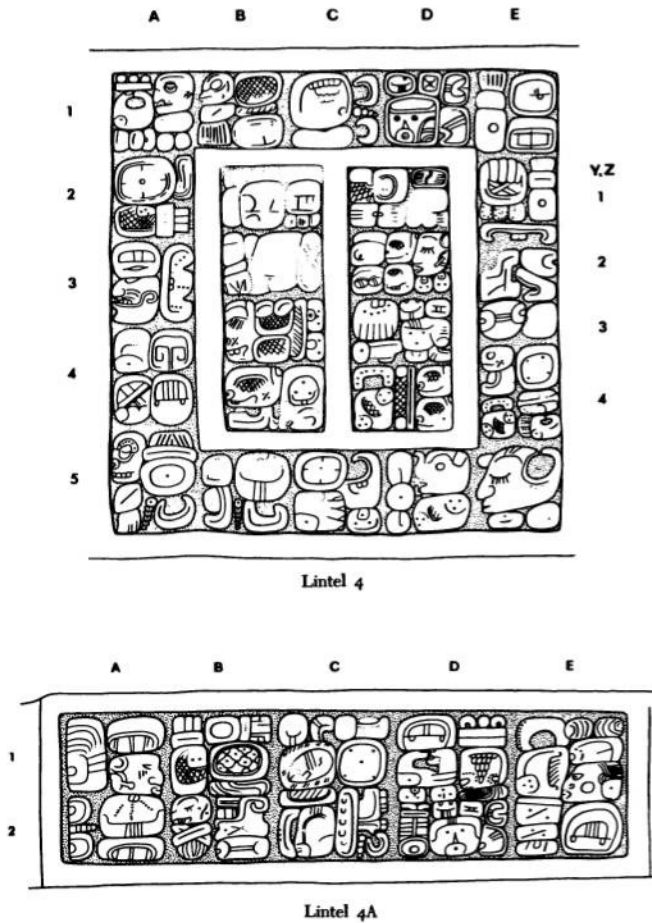


Fig. 11 Lintel 4 of the Monjas, Chichen Itza. "Jawbone-Longbone" named at E3; Kakupacal named at Y3 (after Bolles 1977: 271).

Kakupacal follows that of "Jawbone-Longbone" and is linked to it by a pair of glyphs which Kelley has interpreted as marking a father-son relationship

"Yax T'ul's" name appears on Lintels 1 and 4 of the Temple of the Four Lintels, Lintel 2 of the Monjas, the Initial Series Lintel, and the Caracol Stela at Chichen Itza (Davoust 1980: 26; Kelley 1982: 6, 10, table 1). The "Yax T'ul" (or "Great Rabbit") compound was apparently a widespread title during the Late Classic, and has been identified in the name phrases of other rulers or noble women in Palenque, Copan, Quirigua, and Bonampak (Davoust 1980: 26; Kelley 1982: 6; Mathews 1980: 61).

In addition to the references to similar "Jawbone-Longbone" and "Yax T'ul" glyphs in the inscriptions of Sacchana and Chichen Itza, the general style of the glyphs at Sacchana is close to that of the contemporary monuments at Chichen. Both have a general crudeness of execution and lack of careful composition. While this could be attributed to the general technical decline that occurred during the Terminal Classic, and as a symptom of the "collapse," it should be noted that the treatment of the Initial Series Introductory Glyph of Sacchana Stela 1, with its elongated form and two dots at the base, is quite close to

the Introductory Glyph on the Initial Series Lintel at Chichen Itza (cf. Beyer 1937: fig. 702).

Because of these close parallels between the dates and style of the Chichen lintels and the Sacchana stelae, it seems reasonable to regard the "Jawbone-Longbone" and "Yax T'ul" glyphs on Sacchana Stela 2 as references to the same historical figures mentioned at Chichen Itza. In order to further confirm this identification, however, I will examine some other indications of contact between the northern lowlands and the sites of the Comitán Valley in Chiapas and Chacula district in Guatemala.

A stela (Stela 1), said to have been found at Comitán, Chiapas, has a clear reference to Zero Kins and a Calendar Round date of 9 Ahau 18 Yax (Fig. 12). Blom (1927: 421–422) places this at 10.2.5.0.0 in the Long Count, which would make it contemporary with Sacchana Stela 1. In fact, the break at the bottom of Sacchana Stela 1 matches that at the top of Comitán Stela 1, indicating that they are parts of the same monument. I suspect that the Comitán stela was not found there but rather brought from the nearby site of Sacchana (or Quen Santo). The carving style of this monument is coarse, with interior detail indicated by shallow incision, and is best compared with the style of certain Yucatecan monuments that Proskouriakoff termed Decadent or "non-Classic" (Proskouriakoff 1950: figs. 89, 104a, b). The spear carried by the figure is close to that held by the figure wearing the "Knife-Wing" bird headdress on Seibal Stela 1 (Fig. 1), while the prominent diagonal element in the headdress recalls those seen on Seibal Stelae 11



Fig. 12 Comitán Stela 1 (after Blom and LaFarge 1927: fig. 352).

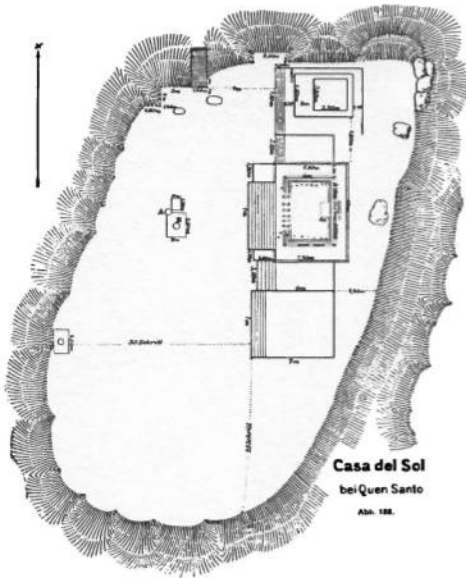


Fig. 13 Plan of the "Sun-Temple," Quen Santo (after Seler 1901: fig. 188).

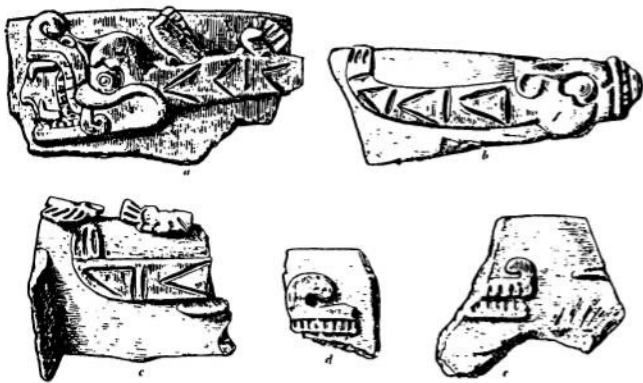


Fig. 14 Pottery fragments depicting feathered serpents, from the "Sun-Temple," Quen Santo (after Seler 1901: fig. 201).

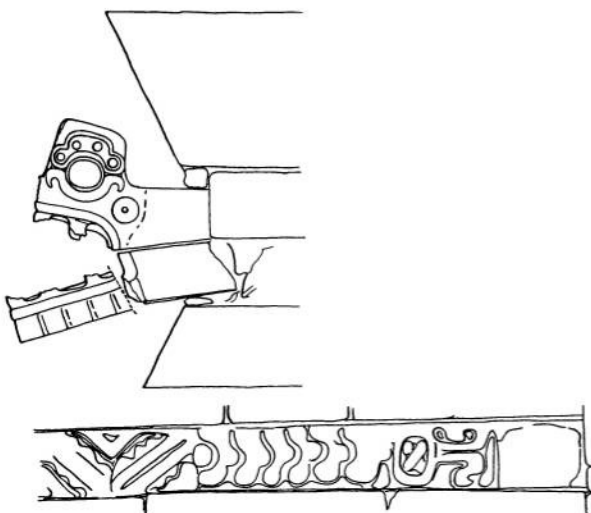


Fig. 15 Serpent sculpture from the Iglesia, Chichen Itza (after Bolles 1977: 233).

and 8 (A.D. 849) (Greene, Rands, and Graham 1972: pls. 107, 110).

Assuming that Seler is correct in attributing the Sacchana stelae to the archaeological site of Quen Santo, we will briefly consider evidence from that center which tends to confirm the identification of the "Jawbone-Longbone" and "Yax T'ul" glyphs as references to the same persons mentioned at Chichen Itza. Highly suggestive of such contact between northern Yucatan and the Chacula district is the structure known as the "Sun-Temple" at Quen Santo (Seler 1901: 132-145) (Fig. 13). In the center of the rear wall of the temple was a pavement which Seler (1901: 133) believed may have been a support for an altar. More important, along the north and south sides of the temple was a row of cylindrical or disk-shaped stones. It is possible that these stones are the bases of former columns. The general arrangement of the building, with an altar at the rear and possible interior columns, recalls that of a number of the so-called Toltec-Maya buildings at Chichen Itza, including the Temple of the Warriors, Temple of the Chacmool (Morris, Charlott, Morris 1931, 1: 101), High Priest's Grave (Ruppert 1952: 34-35), or the Temple of the Interior Atlantean Columns (Ruppert 1952: 39). On the narrow platform ledge at the back of the "Sun-Temple" Seler found many sherds of discarded pottery which included sections of *incensarios* with human effigies and modeled sherds that appear to depict feathered serpents (Fig. 14). The human figures wear specialized laced leggings or garters resembling those on Seibal Stela 1, while the feathered serpents have an odd method of displaying their plumes on tablike projections from the body. Although Seler (1901: 141, fig. 203) identified one of these serpents as a *Xiuhcoatl* or "Fire-Serpent" on the basis of the recurved nose, they more closely recall several of the serpents (some partly or fully feathered) from the Terminal Classic northern Maya sites of Uxmal (Foncerrada 1965: figs. 39-40) and Chichen Itza (Fig. 15) or those seen on some late mold-made Jaina figurines (e.g., Corson 1976: fig. 20d).¹⁰ In Pueblo Viejo, Quen Santo, Seler (1901: fig. 174; 1960, 2: fig. 3) found pieces of a cylindrical stone monument whose sides carried star or Venus glyphs that closely resemble those from the East Wing of the Monjas at Chichen Itza (Beyer 1937: fig. 368).

At Uaxac Canal, near Quen Santo, Seler (1901: 38-41; 1960, 2: 252) discovered a tomb burial containing the remains of two figures accompanied by two tripod bowls and a pyriform goblet of X Fine Orange ware (Silho) polychrome pottery of a form related to that found in the Gulf Coast region and in northern Yucatan at Chichen Itza. Also found in the Hill Group 1 at Uaxac Canal were fragments of stucco sculpture from one of the buildings (Fig. 16). These stuccos are quite similar to those found at Seibal (Smith 1982: figs. 47-49). Of particular significance is a stucco fragment representing the eye of a grotesque reptilian (Seler 1901: fig. 22b). The scrolled supraorbital plate with internal disk and "feathered" eyelid of this piece

¹⁰A comparable sculpture of a serpent head containing a human head in the maw also occurs at Seibal (Smith 1982: fig. 93).

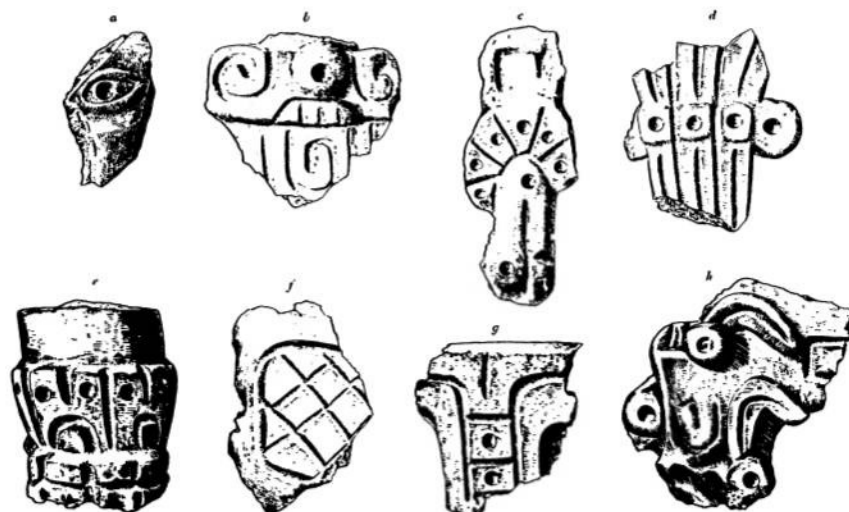


Fig. 16 Stucco sculpture fragments from Uaxac Canal, Guatemala (after Seler 1901: fig. 22).

resemble the mosaic mask elements of the northern Maya area so closely as to suggest that the latter provided the direct models for the Uaxac Canal example. Close parallels can be found on masks from the Lower West Temple of the Pyramid of the Magician, the North Structure of the Nunnery, and the House of the Governor at Uxmal (Foncerada 1965: figs. 21, 22), as well as on masks from the East Wing of the Monjas at Chichen Itza (Fig. 17).

The Cycle 10 stelae and northern Maya related architecture suggest that the sites of Quen Santo and Uaxac Canal date primarily to the late Terminal Classic and early Post-Classic periods. There is evidence that the trade route linking this region with the Usumacinta drainage, and ultimately with the Gulf Coast and northern Yucatan, was established somewhat earlier at the site of Chinkultic in the Comitan Valley of Chiapas. Joseph Ball (1980: 94–95) has suggested that the major architectural and sculptural undertakings at Chinkultic coincide with the late facet of his Yobnajib ceramic phase (ca. A.D. 770–900) and continue into the Tepancuapan phase (ca. A.D. 900–1250?). During this time at least three members of the Altar group Fine Orange paste ware and one of the Fine Gray Tres Naciones group occur at Chinkultic. There are also other sherds and vessels from the general upper Grijalva area, including at least one example of Pabellon Modeled-carved pottery. According to Ball (1980: 95):

Together, these strongly suggest interaction with the eastern Tabasco–western Campeche coastal plain, most probably via the Usumacinta–Pasión drainage system (Ball 1978). This ceramically-inferred pattern is given clear and extensive support by the sculptured stone monuments on the site, all of which show pronounced ties to the Pasión–Upper Usumacinta zone. On the whole, it is difficult to avoid the conclusion that elite-level ideas if not individuals from the latter penetrated forcefully up into the Comitan Valley during the final third of the eighth century A.D.¹¹

Ball has correctly pointed out the general stylistic similarity between the Chinkultic sculptures and those of the upper Usumacinta–Pasión drainage region. It should be noted, however, that there are certain epigraphic or artistic features on several of the monuments that also suggest some links with northern Yucatan. For example, the Initial Series date of 9.17.10 [0.0] (A.D. 771) on Chinkultic Stela 7 lacks the Uinal and Kin periods (Blom and La Farge 1927: 433), and therefore is an example of a “truncated” Initial Series of a type also known from Xcalumkin (Closs 1983: fig. 1) and Oxkintok (Houston 1984: fig. 1) in the Puuc region.¹²

The Yucatec connections, which are implied by the common use of a “truncated” Initial Series on Chinkultic Stela 7 and on monuments from Xcalumkin and Oxkintok, are evident too on Chinkultic Stela 9, which also apparently

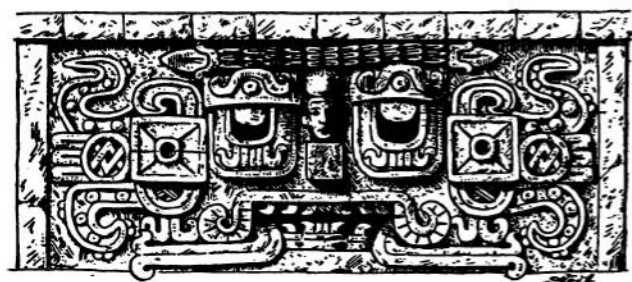


Fig. 17 Mask panel from East Wing of the Monjas, Chichen Itza (after Seler 1960) 5: fig. 38).

¹¹These interregional connections apparently persisted into the succeeding Tepancuapan phase (A.D. 900–1250?). During the early facet of this phase the Altar group Fine Orange paste wares continued to be used, while the “Post-Classic” marker Tohil plumbate also makes its appearance. According to Ball (1980: 97) fill sherds indicate that construction on the Group C Ball Court was completed during this phase, suggesting that the adjoining architectural complex was also used at this time.

¹²According to Blom (in Morley 1937–38, 4: 278), the inscription begins with 9 baktuns, followed by 19 katuns. It is difficult to see the inscription, however, in Proskouriakoff’s (1950: fig. 75b) illustration. The possibility might be left open that the monument dates one or two katuns earlier than 9.19.0.0.0, although probably no earlier than 9.17.0.0.0.



Fig. 18 Chinkultic Stela 9 (after Proskouriakoff 1950: fig. 75b).



Fig. 19 Uxmal Stela 14 (after Proskouriakoff 1950: fig. 92b).

had a "truncated" Initial Series (Fig. 18). This monument portrays a figure with an enormous, broad-brimmed headdress like those seen on Stelae 11 and 14 at Uxmal (Fig. 19) or those worn by figures in the Mul-Chic murals (Barrera Rubio 1980: figs. 1–3). A similar headdress, however, is worn by one of the principal figures in the battle mural from Bonampak (Ruppert, Thompson, and Proskouriakoff 1955: fig. 28), which dates to about the same time as Stela 9. This need not negate the Yucatec connections, since Structure 1 at Bonampak has three-member binder moldings like those seen in northern Maya architecture, and since Fox and Justeson (1980) have suggested that Yucatecan may have been the language recorded in the Bonampak inscriptions (Morley, Brainerd, and Sharer 1983: 504). Morley (1937–38, 4: 278) says that Chinkultic Stela 9 was dated by an Initial Series to 9.19.0.0.0 (A.D. 810), a placement that harmonizes with the dates of the other monuments from the site. There is a particularly strong resemblance between the large ringlike collars worn by the figures shown on Chinkultic Stelae 1 (9.17.10.0.0 ?) and 9 (Blom and La Farge 1927: fig. 360), and the facial profiles share the dramatically sloping forehead and large lower lip. While this might be attributed simply to local taste, it is also possible that Stelae 1, 7, and 9 are portraits of the same individual, shown during the years from A.D. 771–810. Sequential portraits of this type certainly occur at other Maya sites, as is made clear by Andrea Stone (this volume) in her discussion of Piedras Negras monuments.¹¹

Having pointed out evidence for direct and continuous contact between northern Yucatan, the Usumacinta-Pasion drainage, and the Comitán Valley and Chacula district, I will now relate this pattern of interaction to wider socioeconomic currents affecting Mesoamerica during the Epiclassic period. In an important paper, Malcolm Webb (1978) defined the Epiclassic as the period from A.D. 750–950. Following Jiménez Moreno (1966), Paddock (1966), and Nicholson (1960), he suggested that "the beginning of this period was marked by the effective demise of Teotihuacan, the most dominant Classic site not only of the Mexican central highlands but of all Mesoamerica. . . it was during this period that the basic patterns of Postclassic history were established." Webb (1978: 160–161) suggests that by the Epiclassic period there had emerged

a zone of persistent architectural, sculptural, iconographic, and ceramic intercontact linking together a number of highland and Gulf Coast centers—Cholula (at first alone, then both Cholula and Tula), Xochicalco, Tajin, Remojadas, Cerro de las Mesas, Cerro Montoso, coastal Tabasco, the Rio Bec area, the Puuc sites, and (less clearly) the lower Usumacinta, and having more diffuse connections with the highlands of Chiapas and Guatemala and with lower Central America.

¹¹On the other hand, it is also possible that more than one individual may have worn essentially the same costume for ritualistic and/or functional purposes. This was the case with the standardized warrior costume worn by the series of Piedras Negras rulers discussed by Stone (this volume).

Each link in this chain of sites and regions corresponds closely with the documented major Gulf Coast-Yucatan-highland Guatemalan trade network that existed at the time of the conquest (Chapman 1957; Thompson 1970; Wauchope 1964). Along these routes valuable goods such as cacao and slaves were moved from Tabasco, Yucatan, and Soconusco to Central Mexico, while salt was transported from both Central Mexico and Yucatan to salt-poor locales. As Webb notes, the Mexica were vitally concerned with controlling this trade route and bent much of their martial might toward this end, going so far as to establish an isolated "province" in Soconusco and a port of trade at Xicalango. It seems likely that the Tula Toltec, whom the Aztecs considered their imperialistic mentors, also expanded their influence along the same trade routes during the Early Post-Classic (ca. A.D. 900–1200). Judging from architectural and artistic evidence, Tula eventually became one of the dominant partners in, and perhaps gained effective control over, this commercial network for a considerable period. But, as this paper demonstrates, during the ninth century the initial reconsolidation of this trade network was the result of the expansionist activities of the Chontal or Itza Maya.

As Santley (1983, this volume) notes, this pan-Mesoamerican trade network was initially consolidated during the Early Classic by Teotihuacan, which maintained effective control by establishing enclaves at sites such as Matacapán and Kaminaljuyu and by maintaining close links with entrepôts or "interaction centers" such as Tikal. During the earlier phases of the Epiclassic, however, it is more difficult to assert that any members of this network attained supremacy. Rather, the evidence seems to suggest a period of shifting alliances and trade partnerships, with the fortunes of some centers rising as those of others declined. This would seem to describe the general situation in the western Maya area, along the commercial thoroughfare of the Usumacinta River and its tributaries, as well as in northern and central Yucatan. During the seventh and eighth centuries, sites such as Palenque, Piedras Negras, and Yaxchilan rose to prominence. Political alliances and contacts are suggested by references to rulers of one site in the inscriptions of another. For example, "Lintel" (Wall Panel) 3 at Piedras Negras (A.D. 782) refers to the arrival at the site in A.D. 757 of a person named "Bat Jaguar" (probably "Bird Jaguar") of Yaxchilan (Marcus 1976: 85–87). Similarly, the Hieroglyphic Stairway of House D at Palenque apparently refers to "Shield Jaguar I" of Yaxchilan (Ferguson and Royce 1977: 48–49; Marcus 1976: 84–85). As Marcus (1976) has pointed out, the distribution of emblem glyphs indicates that each site developed a political territory in which dependent centers mention the major center, and in which political ties are sometimes cemented by royal marriages or other family connections. A clear instance occurs at Bonampak, where Stela 2 names the wife of the local ruler "Chaan-Muan" as "Lady Yax-Rabbit from Yaxchilan" (Mathews 1980: 61, fig. 2). That these well-known Late Classic Usumacinta centers were under some pressure to defend their territories is indicated by the frequency with which warfare and captives are shown in

sculpture and mural paintings (e.g., at Bonampak, Miller 1986). Although the political effects of many of these military encounters may have been transitory, they nevertheless indicate continuing efforts on the part of the western dynasts to maintain their "piece of the action." In at least one instance during the eighth century, moreover, it is clear that the lords of the Petexbatun region (centered at Dos Pilas) sought to expand substantially their territorial claims by capturing the rulers of Seibal and Cancuen (Houston and Mathews 1985: 17–18, 24). In fact, the Dos Pilas rulers may have been able to create a small-scale state, but their political hegemony was shortlived, since Seibal had reclaimed its sovereignty by about A.D. 800.

As these Usumacinta and Petexbatun sites declined in the late eighth and early ninth centuries, other centers, such as Altar de Sacrificios and Seibal, continued to be occupied and, to judge from ceramic evidence (e.g., the prominence of Fine Orange ware and Pabellón Modeled-carved ware), appear to have established much closer connections with peoples of the southern Gulf Coast and southwestern Campeche. At Seibal, Graham (1973) has shown that the sculptural style and writing system changed at about A.D. 849. An earlier group of monuments, dating about A.D. 830–849, shows somewhat closer connections with Classic Maya artistic and epigraphic norms, as well as evincing connections with northern Yucatan. From A.D. 849 to about 900–930, many more "foreign," "non-Classic," and "Central Mexican" elements are introduced, such as Ehecatl (bird-beaked) figures, darts and *atlats*, and "Mexican" day signs. Graham sees enough differences in the monuments before and after A.D. 849 to suggest that two different ethnic groups are responsible for them, the first of whom he calls the Facies A and the second the Facies B. Interestingly, the Facies B group is portrayed on monuments that are coeval with the lintels from the "Chichen-Maya" buildings at Chichen Itza. These include the figure on Stela 1 (A.D. 869) who wears the "Knife-Wing" bird headdress depicting the same mythological bird shown on two of the Chichen Itza lintels (Fig. 1). In addition, Stela 20 (A.D. 889) shows a figure with darts and curved fending stick reminiscent of the weapons carried by "Toltec" figures at Chichen Itza (Greene, Rands, and Graham 1972: pl. 116; Proskouriakoff 1950: fig. 107b; Coggins and Shane 1984: 49). Strong connections between Chichen Itza and Seibal are also indicated by the appearance of "prowling jaguars" in the sculpture of both sites (Figs. 8a, b). Interestingly, in the territory between Seibal and Chichen Itza the prowling jaguar motif is found as an architectural sculpture at the site of Atasta in the western end of the Laguna de Terminos (near the later Xicalango) (Fig. 8c). A jaguar seat or throne from Atasta (Berlin 1956: fig. 7d, e) also closely resembles those found at Chichen and bears some similarity to a jaguar "altar" or dais at Seibal (Smith 1982: fig. 140).

As noted, Chichen Itza connections are also apparent at Quen Santo, whose two stelae (Sacchana Stelae 1 and 2) have dates of 10.2.5.0.0 and 10.2.10.0.0 (A.D. 874 and 879) and feature the "Jawbone-Longbone" and "Yax T'ul" names common in Chichen Itza inscriptions (Figs. 6, 9–11). I suspect that these close links with Chichen Itza either

attest to a movement of northern Yucatecans into Seibal and Quen Santo after A.D. 849 or, more likely, that the Terminal Classic rulers of Chichen Itza shared an original coastal homeland, family ties, and political connections with the new rulers in the south.¹⁴

Given current evidence, Chichen Itza should be viewed as an intrusive site in northern Yucatan that witnessed its first significant occupation late in the Terminal Classic. Although there was perhaps an earlier resident population (see Ball and Taschek, this volume), Chichen did not become an important site until about A.D. 850, when it was invaded by a faction of the Itzas (Chontal Maya) led by the figure Kakupacal mentioned in the inscriptions dated between A.D. 869–881.¹⁵ Other members of the Itzas, perhaps including Kakupacal's father "Jawbone-Longbone," "Yax T'ul," and the figure known as "Knife-Wing," simultaneously moved southward after A.D. 849 into the Pasion drainage and the Comitán Valley and Chaculá district. The exact homeland and principal sites of these people are still hazy, but the iconographic similarities between Atasta, Chichen, and Seibal suggest that they were located in the eastern Tabasco-southwestern Campeche region. Perhaps some of the still untouched sites in the Candelaria district, such as the large center El Tigre, will one day provide further confirmation (Andrews 1943: 49, fig. 25d, e). Although the Itzas at Chichen Itza probably were in close contact with the Toltecs of Tula at this time, actual warriors from Central Mexico (or figures sharing Tula-Toltec insignia at any rate) seem to have been present at the Yucatecan site only slightly later, perhaps coming between A.D. 886 (one of the dates associated with the Caracol) or A.D. 906 (another possible Caracol date) and A.D. 925.¹⁶ They certainly arrived well before the A.D. 998 date of the Toltec-Maya High Priest's Grave.

The Epiclassic period can be said to have ended when some of the jockeying for power and competition for trade routes that characterized the time was ended by the establishment of Tula's dominance in the Basin of Mexico and by the extension of closely allied Itza power into northern Yucatan, the Usumacinta-Pasion drainage, and highland Chiapas and Guatemala as well.¹⁷ Many of the characteristics of the

Epiclassic, such as internationalism or widespread diffusion of trade goods, continued to typify the early Post-Classic, but the artistic eclecticism was tempered by the imposition of a new Horizon style (particularly at Tula and Chichen), while certain types of pottery (particularly Tohil plumbate) attained a nearly pan-Mesoamerican distribution. The competition for long-distance trade that developed after the demise of Teotihuacan, and which had initially encouraged the rise of regional centers and diverse yet interconnected art styles, was finally resolved by the forcible imposition of a greater unity. It required the foundation of a Maya-Mexican cartel and interaction between two powerful polities centered at Chichen Itza and Tula before such unity was finally achieved.¹⁸ The innovative "Toltec-Maya" forms of art, architecture, and iconography shared by the Itza participants in this militaristic mercantile monopoly constituted a visual means by which they demonstrated their role in a new order,¹⁹ while more traditional or "Classic" forms and iconography at sites such as Chichen Itza and Seibal permitted them to validate their expanded rule by linking it with the Maya past.

flows in. The names of the rulers and people of these sites feature both Maya and Nahuatl words, which, as Thompson (1970: 31) notes, is a practice typical of the Putun of Acalan-Tixchel and the Putun of the Chontalpa. The men of these two towns are reputed to have carried on trade with the people of Tabasco. Thompson (1970: 37) argues that Kak Balam (rechristened Nuestra Señora de Dolores) was settled between 1559 and 1608. However, the two towns in question occupy approximately the same positions as the archaeological sites of Quen Santo and Uaxac Canal, suggesting the possibility that there had been a continuous occupation of Putun-Itza Maya in this region and at these two towns from Terminal Classic times. Indeed, Thompson (1970: 37) suggested that: "There seems to be a very good case for believing that the people of eastern Acalan were descended from a mixture of invading Putun from the Gulf of Mexico, quite probably from Western Acalan (Putun of the province ruled from Itzamkanac), and local Maya of Chol speech. If one may make one more assumption, it seems not improbable that those invading Putun were part of the same succession of waves which reached Altar de Sacrificios and, at a later date, Seibal."

¹⁸See Freidel (1986: 419 ff) for a complementary discussion of the development of Terminal Classic and Early Post-Classic Maya-Mexican "cartels."

¹⁹Note, however, that distinguishing between the "new" versus the "old" in the art and iconography of the Terminal Classic and Early Post-Classic is a thorny problem. As Stone (this volume) points out, for instance, many similarities exist between the Teotihuacan costume set seen at Early Classic Tikal and the "Toltec" costume at Chichen Itza.

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¹⁴See note 1 and Ball and Taschek (this volume).

¹⁵Although Ball and Taschek (this volume) suggest an important "middleman" role for the Itza throughout the Classic period, the Itza apparently began their aggressive territorial expansion only during the Terminal Classic period. Coggins (n.d.: 2, 24) recently has suggested that several of the important Toltec-Maya (or Itza?) buildings at Chichen Itza, such as the Outer Castillo, may have been constructed as early as A.D. 830 (to commemorate the baktun completion at 10.0.0.0.0). I believe that the data will not support such an early date. There are no inscriptions that can be ascribed to this time, and, as this paper suggests, what is apparently the earlier art and architecture at Chichen has clear affinities with that of the Facies B monuments and Bayal phase buildings at Seibal.

¹⁶The earlier introduction of certain "Toltec" features is also suggested by the Temple of the Hieroglyphic Jamb, a patio-quadrangle structure bearing a probable date of 10.2.15.2.13 (A.D. 884) (Kelley 1982: 12–13).

¹⁷For discussions of other Chontal and "Toltec" influences in the southern highlands see Sharer (Morley, Brainerd, and Sharer 1983: 176–179) and Fox (1980). The connections between the Gulf Coast and Chiapas-Guatemala highlands persisted into the Post-Conquest period. The 1695 expedition into what Thompson (1970: 27) terms "Eastern Acalan" (the region south of the upper Usumacinta and lower Pasión) found two large towns, Culucan and Cagbalan (Kak Balam) located in the bend of the Lacantun River a few miles downstream from where the Ixcán River

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Teotihuacan's Fall and the Rise of the Itza: Realignments and Role Changes in the Terminal Classic Maya Lowlands

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Nobody ever got to a single truth without talking
nonsense fourteen times first.

F. Dostoyevsky¹

INTRODUCTION

THERE ARE MANY POTENTIAL PERSPECTIVES from which the effects of Teotihuacan's decline on the Maya Lowlands might be evaluated. Focusing on the brilliant cultural florescence and apparent ideological transformations that characterized the late sixth through early eighth centuries, several authors have examined the roles played by such complementary processes as cultural syncretism and nativistic revitalization during this interval (Dahlin n.d.; Ashmore and Sharer 1975; Coggins 1979; Becker 1983). Others have pointed out that major changes in Lowland Maya economic and political interaction patterns also occurred at this time and were related in some way to Teotihuacan's failure (Willey 1974; Ball 1977a; Becker 1983). This essay examines one such set of changes as a historical example of a cultural system's effort to maintain its economic status quo through transformation of its sociopolitical and commercial roles.

The essay is primarily a straightforward inductive reconstruction of pertinent eighth through twelfth-century events on the Yucatan peninsula. Such reconstructions remain a necessary adjunct, if not prelude, to processual analyses. As Colin Renfrew (1984: 3) underscores in the introduction to his emphatically processual work, *Approaches to Social Archaeology*, "reconstruction is indeed one of the legitimate concerns of the historian and archaeologist, and a necessary preliminary to further analysis." Beyond this, however, the essay attempts to present these historical events as exempla of an important systemic process: trans-

formation of one cultural system's state or relationship to its external sociopolitical environment as a homeostatic response to maintaining the internal equilibrium of its own economic subsystem.

The present reconstruction combines archaeological, epigraphic, and Post-Conquest literary data in a conjunctive model of Terminal Classic/Early Post-Classic events. In so doing, the archaeological and epigraphic records are used to test and inform the historical traditions related in the Colonial sources. The resulting model differs from another recently proposed by the senior author (Ball 1986), and it is hoped that several interpretive errors flawing the latter have herein been corrected.

TEOTIHUACAN, COMMERCE, AND THE ITZA

Robert S. Santley has argued convincingly on several occasions that the real history of Teotihuacan is that of the development, expansion, and ultimate collapse of Mesoamerica's most ambitious and aggressive commercial system, one seemingly obsessed with controlling the exploitation and marketing of obsidian as well as other select commodities throughout its known world (Santley 1980, 1983, 1984; Sanders and Santley 1983; Santley, this volume). One important maneuver in accomplishing this would have been the establishment and maintenance of secure access on a preferential, if not exclusive, basis to the vast commercial opportunities represented by the Maya Lowlands. A vital step in implementing this maneuver would have been development of a reliable network of entrepôt facilities and commercial go-betweens with respect to that area. Santley has identified a series of Teoti-

¹The authors thank J. A. Sabloff and G. R. Willey (Willey and Sabloff 1980: 181) for bringing this quotation to their attention.

huacan enclaves and interactive nodes pertaining to such a network with specific reference to the commercial movement of obsidian (Santley 1983, this volume). Following Hammond (1972), he has also charted the probable pathways of this network based on the Classic period distributions of obsidian from El Chayal and the Central Mexican Highlands (see Nelson 1985; Nelson et al. 1983; Healy et al. 1984).

Not identified in Santley's model are those who occupied the key intermediate zone on the southern Gulf Coast between Matcacapan and the Maya Lowlands. Evidence as to their identity is preserved in the historical distribution of Mayan linguistic groups (Fox n.d.) and the glottochronological evidence for their divergence (Kaufman 1974; Justeson et al. 1985). We suggest that they were Cholan Maya, much later to be referred to by Yucatecan Maya and Tutul Xiu as *Itza*.²

In actuality, Colonial era sources from Yucatan lump together as a single, ethnically alien *Itza* nation what were at least two linguistically and politically divergent groups.³ Of these, one appears to have been based originally in the eastern Peten lakes region (Shuman 1978; Edmonson 1982: xvi; Ball 1986) with affiliations extending minimally as far south as Copan.

The other occupied the coastal plain-and-range area at the southwestern base of the Yucatan peninsula (Tozzer 1941: 20–22; Thompson 1970; Ball 1974). Drawing on suggestions made independently some years ago by N. Hellmuth (1977) and A. Chase (1986), we will distinguish these as the “*Itza*” from the southwestern zone, and the “*Ytza*” from the eastern Peten.

An interlinked triad of location, language, and cultural patterns determined the historical positions of the southwestern Cholan Maya and their eastern “cousins.” Initially, the southwestern Cholan “*Itza*” most probably were little more than local commercial go-betweens. They occupied the right geographical location at the right historical moment to provide the port-of-trade facilities and transport services required by interested Mexican and Lowland Maya parties.

Cultural eclecticism and polylingual facility are characteristic of peoples inhabiting “international” border zones (Price 1973), and would have well equipped the Cholan for a role as intermediaries and facilitators. As sixteenth-century sources attest, the technological adaptations necessary for travel, transport, and even everyday life on the watery Chontalpa coastal plain also suited its inhabitants

exceptionally well to serve as upriver voyageurs (Scholes and Roys 1948; Thompson 1970). We suggest that the Cholan were thus integrated into the complex overland and riverine movement-marketing system interlinking Teotihuacan, the Maya Lowlands, and the Maya Highlands, and that through the Early Classic their own economy became increasingly dependent upon participation in this larger system.

In the early sixth century, Teotihuacan's political and economic influence in eastern Mesoamerica began to wane. Simultaneously, the Western Cholan began to assume an increasingly entrepreneurial role. One highly visible reflection of this is the rapid emergence of Palenque as a major regional center in the late sixth century. Subsequent Cholan fortunes similarly are attested to by Palenque's seventh through eighth-century florescence.

By the last quarter of the eighth century, the Western Cholan no longer were content merely to maintain the old Teotihuacan-fostered system. Instead, they moved to take direct control over its operation. To accomplish this, “*Itza*” forces moved up the riverine arteries away from the Gulf coastal plain progressively seizing inland entrepôts, distribution centers, and commodity source zones. At the same time, they continued to provide transport services and coastal entrepôt facilities, as at Comalcalco⁴ (see Fig. 1). Thus they gradually brought the entire western or “El Chayal sphere” system under their own control.

Elsewhere in this volume, Kowalski discusses the epigraphic data recording late eighth through early tenth-century “*Itza*” expansion. Several individual episodes in its progress have been noted previously by scholars, although their combined significance has not been fully appreciated (see, for example, Sabloff and Willey 1967; Thompson 1970; Adams 1973; Ball 1974; A. Chase 1985a).

With the seizure of major upriver interactive nodes and commodity source zones during the very late eighth and ninth centuries, the “*Itza*” completed their transition from the facilitator-mediator-voyageur role to the mercantile imperialist one. Below we examine the historical particulars of this transition and its aftermath as evinced in the archaeological, epigraphic, and Post-Conquest literary records of the Maya Lowlands.

It is considerably more difficult to provide a pre-tenth-century pedigree or motivational background for the southwestern “*Ytza*.” Situated in the eastern Peten lakes region, they would seem more likely to have been end-line receiv-

²Almost forty years ago, A. Barrera Vásquez and S. G. Morley (1949) suggested that the Colonial-typed *Itza* were descended from those responsible for the grandeur of Classic Maya civilization in the southern-central Lowlands. In this connection both Roys (1962: 40–41) and Kelley (1968: 262) point out that the often cited linguistic ineptitude of the *Itza* in fact represents the viewpoint of the Mexican-affiliated Xiu. Kelley (idem) more specifically observes that: “The word which they use to say that the *Itza* speak badly is . . . a Nahua word. . . . I would suggest . . . that the description of the *Itza* as ‘foreigners’ is from the viewpoint of the Mexican intruders, . . . the *Xiu*. . . . I would also suggest that the original language which the *Itza* spoke badly was Nahua and that they spoke it badly because their native tongue was some Mayan language.”

³The Colonial period traditional literature in fact does frequently distinguish between the original “*Itza*” and later “*yala Ah Itza*” intruders.

⁴We suggest that a shift took place between the late seventh and early ninth centuries from Matcacapan, a probable Nahua-Mayan “exit” facility, to Comalcalco, a likely Mayan-Nahua “entry” port. Through the two centuries that Teotihuacan represented a failing yet still potentially aggressive force in the political economics of eastern Mesoamerica, the Western Cholan sagaciously based themselves at the naturally fortified and easily defended escarpment site, Palenque. With the final, mid eighth-century collapse of the great Central Mexican city-state as an effective international power, however, the Palenque Cholan quite pragmatically moved their organizational center down onto the gulf coastal plain. Based on architectural evidence, George F. Andrews (1967) has suggested that Comalcalco was established as a satellite of Palenque, but the comparative occupational chronologies of the two centers (Peniche n.d.) controvert this possibility. Instead, we suggest that Comalcalco was a true manifestation of the “gateway-center” phenomenon (Hirth 1978): successor to Palenque and replacement for Matcacapan.

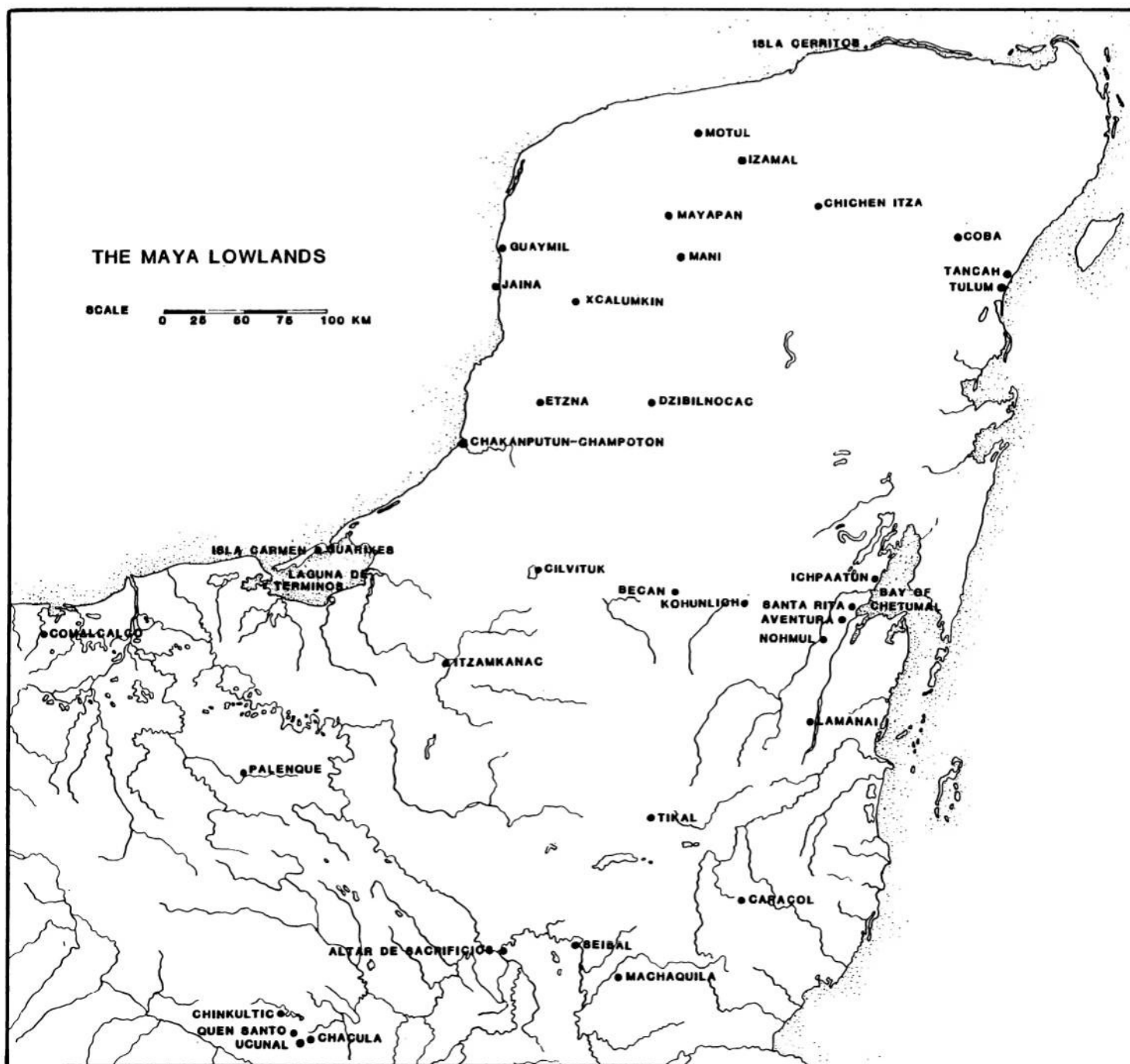


Fig. 1 Map of Maya Lowlands showing sites referred to in the text. Map by J. Taschek.

ers than intermediaries or facilitators. They did, however, occupy an important interface between the central Maya Lowlands and the circum-Caribbean riverine coastal plain to their east.

How early the eastern "Ixtepeque sphere" obsidian movement system with which we suggest the "Ytza" can be linked was operating effectively remains uncertain. Data from Moho Cay at the mouth of the Belize River suggest its use by the early sixth or even late fifth century based on associative ceramic dating (Healey et al. 1984; Ball 1982). Other data from northern Belize and the eastern Peten indicate Ixtepeque obsidian was arriving in those areas

during Late Classic times (Hammond et al. 1984; Rice et al. 1985). It was not until the Terminal Classic (after A.D. 800) that the Ixtepeque source and its movement system acquired real importance, however (Nelson 1985; Nelson et al. 1983; Hammond et al. 1984; Rice et al. 1985).

The "Ytza" themselves do not seem to have become an actively aggressive commercial force until well into the tenth century (see below). When they did do so, we believe it initially was in the context of joining in and supporting what by then had become nearly an exclusive "Itza" monopoly.

The *Itza* ("Itza"-"Ytza") alliance lasted into the late

twelfth century. When it finally broke apart, it was the eastern "Ytza" who emerged as the winners in what appears to have been a long-term competition for absolute control over commercial transport and marketing throughout the Maya Lowlands. By A.D. 1200 their Ixtepeque obsidian-linked, circumpeninsular maritime network had displaced the older inland/overland riverine system as the principal means of commercial movement in eastern Mesoamerica.

Political maneuverings and occasional open conflicts involving the two *Itza* divisions continued on through the Middle Post-Classic period into the fifteenth century. The complex Post-Conquest literary data reporting these have been summarized and ably discussed by several authors (see especially Roys 1962; A. Chase 1986; Edmonson 1986). Still lacking, however, is a coherent conjoining of these data with the Post-Classic lowland archaeological record.

It is, of course, entirely unlikely that any precise history of the gradual takeover and later displacement of the Teotihuacan-fostered, Early Classic movement-marketing system will ever be worked out. To do so would require knowledge of the trivial incidents, the coincidences, and the accidents that collectively add up to political and economic history as opposed to the archaeologically more perceptible "great" events relied on in delineating "cultural" histories. Of the former, it is unlikely that we shall ever have more than just the barest hints. More pertinent is the possibility that we have identified the causative factors underlying the heretofore seemingly purposeless as well as endless wanderings of the *Itza*. We suggest that the interminable *Itza* peregrinations of the Colonial period *Libros del Chilam Balam* are a chronicle of the deliberate and carefully calculated efforts by Cholan Maya groups to maintain, take control over, and ultimately to displace a commercial transport-marketing system elaborated during the political heyday and under the auspices of Teotihuacan.

THE ITZA AND SYSTEMIC CHANGE

Throughout the Early Classic political ascendancy of Teotihuacan, Cholan-"Itza" fortunes prospered in consequence of their probable key role in the commercial network interlinking the Mexican Highlands and Maya Lowlands. With the sixth-century withdrawal of active Teotihuacan involvement from this equation, the "Itza" role as intermediaries and voyageurs swiftly lost purpose and viability. This loss threatened Cholan economic stability and so the well-being of the society as a whole. Reacting, the Cholan moved to sustain the commercial system that had nourished their economy. Initially this involved no more than keeping open established routes and replacing any entrepôts (Santley's interactive nodes) that had withered with Teotihuacan's withdrawal. Gradually, however, mere maintenance of the system proved unsatisfactory or insufficient. From passive participation within an externally developed system during the Early Classic, the Cholan-"Itza" moved to its active maintenance during the Middle and Late Classic periods. In Terminal Classic and later times, they assumed its aggressive control.

In systemic terms, the subtraction of an active Teotihua-

can presence from the affairs of Early Classic eastern Mesoamerica produced perturbations sufficient to bring about major transformations in the pattern of relationships existing between Cholan society and its political-economic environment. These transformations took place in consequence of Cholan efforts to maintain the internal equilibrium and most especially the economic stability of their own cultural system. They reflect both the dynamic equilibrium that existed between Cholan society and the larger political-economic world of Mesoamerica and the potential effects of critical external perturbations on cultural systems in unstable equilibrium (see Clarke 1978: 42-72; Watson et al. 1984: 67-85).

Theoretically, changes involving dynamic continuous systems, such as cultures, can take either of two general forms. In one, the *structure* of the system itself alters through the modification, addition, and/or deletion of at least some of its components and their relationships. Most archaeologists traditionally have assumed culture changes to be system changes of this kind (Renfrew 1981). Alternatively, a system's *state* or pattern of relationships with its environment may alter because of the actions of external and/or internal forces. Although such state changes may occur rapidly and involve significant alterations in the pattern of relationships between a system and its environment, they need not necessarily include any radical transformation of the system's internal components or their relationships (Watson et al. 1984: 84).

We suggest that the transformation of the Cholan-"Itza" from passive commercial intermediaries to aggressive mercantile imperialists represents such a system state change. In its course, systemic equilibrium was maintained and the status quo of the important economic subsystem preserved. Spare as they currently are, archaeological data suggest that these ends were achieved not through any significant internal reorganization of Cholan culture but by means of a major transformation in its manner of articulating with the changing political-economic environment of eastern Mesoamerica. The "rise" of the "Itza" thus provides a classic historical example of culture change as system state transformation.

ETHNOHISTORIC CONSIDERATIONS

With respect to the native literature and related secondary sources from Colonial Yucatan, it has become clear that there is considerably less of pre-twelfth-century historical value to be found in these transcriptions of earlier oral traditions than the senior author has previously argued, particularly with respect to details of chronology. We remain convinced, however, that their overall historical content is significantly greater than held by some (e.g., Cohodas 1978b). This is true especially of major events and their relative order of occurrence, such as the abandonment of primate sociopolitical/ceremonial centers or the seizure of an important enemy's realm. On the other hand, it is probable that by Early Colonial times enough confusion had developed among the Maya themselves as to which "Mayapan" was *the* (traditional) Mayapan, which Chichen Itza, which Tancah/Tulum, etc., that many ascriptions of spe-

cific pre-fifteenth-century events, personages, and dates to these centers were already being made incorrectly (see Ball 1986). A certain few epochal events undoubtedly retained enough significance to have been recorded as precisely as possible, however. We believe the latest of the several successive seizures and abandonments of Chakanputun/Cham-poton very likely were among these. Granting this, informed testing of the archaeological sequence along the lower Rio Champoton could shed enormous light on the real historical usefulness and chronological reliability of the Post-Conquest traditional literature.

Given the seemingly compulsive neurosis of the Maya concerning the predictive value of historical events, it would seem likely that the Calendar Round positions ascribed to particular events in the traditional literature most probably would be reliable (Ball 1986; cf. Morley 1938; Tozzer 1941; Edmonson 1982: xvi–xx). We now believe, however, that quite the contrary is the case and that some events might have been shifted deliberately in order to more accurately fit “real” (cyclical) history and so validate the predictive worth of the chronicles.

This is not to suggest complete dismissal of Colonial era traditional histories on grounds of apparent unreliability, as do Cohodas (1978b) and Kelley (1983: 164–166), but to acknowledge that the pragmatic need by late Pre-Conquest and Early Colonial *chilams* that their prophetic instruments prove accurate might easily have resulted in some deliberate manipulations of historical tradition. Taking this as a working assumption, it seems plausible that later events would possess a greater likelihood of calendrical accuracy than would earlier ones by virtue of being more recent in general memory.

Progressively earlier events would have been more susceptible to “necessary” chronological manipulations so that they might better serve their latent purpose of substantiating the prophetic reliability of the chronicles as well as their manifest one of predicting future happenings. Events more recent in time that did not acceptably fit with the immediate past or with current needs could easily have been “forgotten” for prognostic convenience. These, at least, have been our working assumptions in attempting to extract the real historical information that we believe is embedded in the traditional literature of Colonial period Yucatan.⁵

In the following pages, we present a conjunctive reconstruction of Terminal Classic–Early Post–Classic events pertaining to the foregoing discussion. We intend it as much as a stimulus to future field investigations as a synthesis of currently existing data. To the extent that it does stimulate thought, criticism, and action by others, it will have fulfilled this intended purpose.

⁵Several lengthy discussions with Jeff Kowalski (1984) and Arlen Chase (1982–85) have convinced us that the senior author’s previous placements of some major historical events recorded in the *Libros del Chilam Balam* were erroneous, and we have attempted to correct these. Chief among them, but not directly dealt with in this paper, are the Xiu historical tradition (see Kowalski n.d.: 170–236) and the Hunac Ceel cycle (see Kowalski n.d.; A. Chase 1986). The former we would now assign to the mid twelfth through mid fifteenth centuries, following Kowalski (n.d.), and the latter we would place in the mid fifteenth, as do Roys (1933, 1962), Tozzer (1941, 1957), Kowalski (n.d.), and A. Chase (1986).

Beginnings

In the late eighth century A.D.,⁶ there took place a historically significant series of movements onto the northern coastal plain of Yucatan by peoples originating in the coastal plain-and-range area at the southwestern base of the peninsula where western Campeche, northern Chiapas, and eastern Tabasco today come together (Thompson 1970;⁷ Ball 1974; 1977a; cf. also Andrews and Robles 1985). Glottochronological data based on lexical diffusion and hieroglyphic evidence support the identification of these peoples as probable ancestral Chontal (Western Cholan) speakers (Scholes and Roys 1948; Thompson 1945, 1954, 1970⁸) and the probability of direct interactions involving them and Yucatecan speakers during the ninth and early tenth centuries (Justeson et al. 1985: 57–59, 68–70).

As noted above, these Chontal (“Putun”) were, together with their linguistic cousins, the Eastern Cholan, collectively dubbed the *Itza* by the sixteenth century and later Xiu of Yucatan.

By the early ninth century, the “Itza” had established a major organizational center on the site of the ruins today known to us as “Chichen Itza.” They themselves called it *Mayapan*, and it was to be their principal sociopolitical and ceremonial center until its destruction in the late twelfth

⁶The area-wide weight of archaeological data, radiometric determinations, obsidian hydration results, and even glottochronology still most strongly supports correlation of the Christian and Maya Long Count calendars at 11.16.0.0.0 in the latter. D. H. Kelley’s (1982, 1983) dismissals of the radiometric and hydration-derived data are highly misrepresentative of these methods and the correct interpretation of their raw results, and need to be addressed at length in a more appropriate forum. Chronometric data aside, however, the Terminal Classic/Early Post–Classic archaeological record of the northern lowlands is equally well or better accommodated by a correlation at 11.5.0.0.0 (Kelley 1983) or 11.3.0.0.0 (A. Chase 1986), whether or not the Post-Conquest literary traditions are taken into consideration (Ball 1979b, 1985b, 1986; Kelley 1983; A. Chase 1986; Lincoln 1986). F. Lounsbury (1983) recently has explained away the Dresden Codex Venus table-related objections to an 11.16.0.0.0 correlation, but Kelley (1983: 173–176) has responded with an astronomically viable alternative allowing for correlation at 11.5.0.0.0 (or 11.3.0.0.0) as well. Correlation at 11.5.0.0.0 or 11.3.0.0.0 also makes possible a coherent and internally consistent interpretation of the architectural, epigraphic, ceramic, and artifactual “package” comprised by the “Tomb of the High Priest” at Chichen Itza (see Thompson and Thompson 1938). This monument otherwise seemingly represents a major cultural historical anomaly (Ball n.d.). In a similar vein, correlation at 11.5.0.0.0 or 11.3.0.0.0 redresses the historically discomforting placement of Chichen’s conquest by Toltec forces during or even slightly before the rise of Tula as a major power (e.g., Kowalski, this volume). Correlation at 11.16.0.0.0 currently seems to demand this, and so lends support to the possibility that Tula represented a colonial satellite of the Yucatan center (Kubler 1961, 1975; Cohodas 1978b) rather than to the latter’s being a receptor of highland Mexican influence.

All in all, as a coherent temporal frame within which to interpret the Terminal Classic/Early Post–Classic archaeological-cultural historical record of the northern lowlands, a correlation of the Christian and Maya calendars at 11.5.0.0.0 or 11.3.0.0.0 rather than 11.16.0.0.0 would seem to provide an attractive option. Nevertheless, the far vaster weight of pan-Mesoamerican archaeological and chronometric data continues to support the latter. On this issue, the jury is still out.

⁷Sir Eric Thompson (1970), who first developed this theme almost exclusively on Post-Conquest traditional literary data, places the “Itza” incursion about a century and a half later.

⁸Thompson (1970: 5) preferred the term “Putun,” a name by which at least some Chontal Mayan speakers did refer to themselves.

century, A.D.: "13 Ahau was the katun when they founded the town of *Mayapan*, the Maya men, as they were called."⁹

The real occupational history of the Florescent period settlement-center at Chichen Itza has yet to be worked out and, in fact, simply cannot be on the basis of the archaeological data now available. Until a fresh, carefully designed and executed program of stratigraphic excavations is carried out at the site, what really are little more than informed speculations must continue to serve this purpose (e.g., Thompson 1970; Ball 1979a, 1986; Lincoln 1986).

Attempting to focus on the even narrower temporal spans encompassing *Itza* arrival on the site and its emergence as the paramount ceremonial, if not political and economic, center in the northern lowlands would seem even more futile.¹⁰ However, if the nearly ten decades of intensive archaeological investigations already carried out at Chichen Itza possess any value at all, it is categorically certain that this particular sequence of events took place sometime after A.D. 700 and before A.D. 1200. The authors feel reasonably safe in further narrowing this interval by some fifty to a hundred years at each end but, for argument's sake, will stand with the broader range. Impressive as they may seem, the arguments of Parsons (1969) and Cohodas (1978a, 1978b) for an earlier, Middle Classic florescence of the center simply do not stand up under the weight of ceramic, architectural, stratigraphic, and epigraphic data to the contrary (Kelley 1982; Kowalski, this volume; Ruppert 1952; Tozzer 1957; Brainerd 1958; Lincoln 1986).

Some years ago J. E. S. Thompson (1970: 10–14) attempted to fix the *Itza* arrival in Yucatan more precisely through extrapolation from what he believed to be a Short Count date referring to this event in the *Book of Chilam Balam of Chumayel* (Roys 1933: 114–116). His result was the year A.D. 918. Building on his arguments, but adding to them new knowledge concerning the historical content of the hieroglyphic inscriptions at Chichen Itza (Kelley 1968, 1982; Davoust 1977), the senior author later revised this backward to A.D. 866 (Ball 1979a: 49–50). It now would appear that Thompson's original premise was flawed and that the relevant passage may not in fact provide a date (Munro Edmonson, personal communication, 1980; Kelley 1982: 15). With this in mind, the senior author recently attempted a new collation of the available archaeological, literary, and epigraphic data pertaining to the "Coming of the *Itza*" (Ball 1986). Although this proved largely inconclusive, one seemingly valid result was to associate "Itza" arrival in Yucatan with the site referred to in the late eighteenth/nineteenth-century prophetic literature as *Mayapan*, but known to us today as "Chichen Itza," and to place it sometime during the twenty-year period ending in A.D. 771 (cf. Ball 1974).

The real importance of Chichen Itza/Mayapan in all

probability lay in its role as the primary control center for commercially related resource exploitation, concentration, and export as well as for import distribution on the northern coastal plain (cf. Ball 1977a: 190–192). A. P. Andrews (1978, 1980, 1983; Andrews and Robles 1985) has developed this argument most fully with respect to north coast salt and circumpeninsular maritime commerce. Initially, however, we suspect that the center was established to take control over and maintain old patterns of exploitation and commercial movement rather than to develop new ones. What changed were the roles of the "Itza" and Yucatec actors rather than either the actors or their favored routes of passage. From a probable Early through Middle Classic status as *entrepôt* middlemen and Gulf coastal voyageurs servicing the needs of western Nahua and eastern Yucatecan-speaking peoples, the Chontal-"Itza" emerged in the ninth century as aggressive and successful mercantile imperialists. Their progress, of course, was at the expense of Yucatec Maya economic and political sovereignty. The foundation of Chichen Itza/Mayapan, therefore, was hardly a matter of chance or accident, but a carefully calculated move by an economically aware group with very well defined goals in mind.

Entrenchment

The inhabitants of *Izamal* were conquered by *Kakupacal* and *Uilo*, valorous captains of the *Itza* who were the people who founded *Mayapan*. . . . In the course of time, the inhabitants of *Motul* were conquered by *Kakupacal* and one hundred valorous captains formerly of the city of *Mayapan*.¹¹

In the decades following the establishment of Chichen Itza/Mayapan, the "Itza" entered into progressively ever more intense competition with their northern neighbors, ultimately engaging in violent confrontations and bringing about the successive destructions of the Yucatec polities centered at *Izamal*, *Motul*, and possibly *Coba*, among others. The martial character of most public sculptural and mural art at Chichen Itza is well known (e.g., Tozzer 1957; Miller 1977; Cohodas n.d.; Coggins and Shane 1984). We suggest that its probable impetus lay in the triumphal celebration of the military victories achieved by the "Itza" over their Yucatec neighbors during the early and middle ninth century. By the late ninth century, one member of the "Itza" elite with apparently direct genealogical ties to the Cholan dynastic rulers of *Palenque*, *Kakupacal*, had emerged as a preeminent military leader of the Chichen Itza/Mayapan polity (see Kelley 1982: 8–9¹²). Between A.D. 869 and 881 a series of public buildings were dedicated commemorating him, his relatives, and possibly his exploits. These largely involved local campaigns but possibly also included participation in the expansionist program ultimately affecting the upper *Pasion* drainage and the high-

⁹*El Libro del Chilam Balam de Chumayel* (henceforth, together with other Colonial sources, referred to by name of its ascribed source-village only), *Second Chronicle* (Roys 1933: 140).

¹⁰A seemingly obvious fact persistently overlooked or ignored by many Mesoamerican archaeologists is that the time of a center's rise to political, economic, and/or socioceremonial prominence need not, and in most cases probably did not, correlate with its initial establishment.

¹¹*Relaciones historico-geográficas de la gobernación de Yucatán; Izamal; Motul* (Tozzer 1941: 24, 172–173.)

¹²Kelley (1983), of course, would place these events in the very late eleventh or early twelfth century rather than the ninth.

lands of northwestern Guatemala-southeastern Chiapas, as Kowalski describes elsewhere in this volume.

As the ninth century gave way to the tenth, more and more Yucatec centers were abandoned. Typical of these were Edzna (Forsyth 1983) and Dzibilnocac (Nelson 1973), at each of which the local ceramic and occupational sequences abruptly terminate sometime in the early to middle tenth century. Concerning the fate of the affected populations, nothing definite is known, but patterns of refugee movement characteristic of these same regions during the late sixteenth and seventeenth centuries (Scholes and Roys 1948: 305–315, 336–347; Ball 1985a) suggest emigration into the forests of southeastern Campeche-southern Quintana Roo to be a likely possibility. Unambiguous archaeological evidence of this is lacking, however.

Early in the ninth century, the “Itza” undertook and succeeded in a particularly ambitious political-economic venture, the seizure and revitalization of the transpeninsular *be Chakanputun* or “road of Champoton”:¹³ “In the seventh tun of Katun 8 Ahau, this was the katun when *Chakanputun* perished at the hands of *Kakupacal* and *TecUilu*.”¹⁴

The senior author elsewhere has discussed the economic viability and Terminal Classic/Early Post-Classic historical reality of a transpeninsular, overland route of commercial passage linking Caribbean Central America and mainland Mexico via Chetumal Bay, Becan, and the Laguna de Terminos (Ball 1986: 400–403; see Fig. 2). In that treatment, however, he mistakenly reversed the roles of those who seized and later lost and those who very possibly deliberately choked off or at the least chose to abandon the *be Chakanputun*. This error, which involved confusing the Chontal-“Itza” with the Eastern Cholan-“Ytza” and so reversing the times and consequences of their arrivals at Chakanputun, also had serious chronological consequences, placing the route’s era of operation in the very late ninth and early tenth centuries rather than in the mid ninth through mid twelfth. What is actually commemorated in the “Third Chronicle” of the *Chumayel* as cited above, we now believe, was the successful outcome of yet another economically informed “Itza” military adventure.¹⁵

¹³Some years ago (Ball 1974), the senior author suggested the possible identification of “Chakanputun” with the archaeological site of Seibal. He has since abandoned that idea (Ball 1986) in favor of the more generally accepted correlation of “Chakanputun” with today’s Champoton. At the same time, we suggest that while most scholars have identified such localities as “Chakanputun/Champoton” or “Mani” with individual sites, it is far more probable in many cases that they refer to entire provinces or regions. The “Chakanputun/Champoton” of the chronicles we would thus equate with the region Champoton in most cases, rather than the town Champoton. Ninth-century provincial boundaries remain conjectural, of course, but what is known of later sixteenth-century ones suggests the possible inclusion of central to central-eastern Campeche within the “Chakanputun/Champoton” province of that time.

¹⁴*Chumayel, Third Chronicle* (Roys 1933: 141).

¹⁵In 1984 an important new program of architectural excavations was carried out at Chicanna, Campeche, by archaeologists from the Instituto Nacional de Antropología e Historia, Centro Regional de Yucatán under the direction of Pedro Carrasco V. (n.d.). Among other results, it brought to light a continuous sequence of occupational remains and construction activities involving Rio Bec style buildings that extended from the late fifth or sixth century (A.D.) through the eleventh and possibly into the early twelfth (op. cit.). A suite of eight corrected radiocarbon dates from selected fill, burial, offering, and midden deposits, correlated with specific structural additions or modifications, clearly docu-

In the far southern lowlands and highlands, “Itza” mercantile imperialism had involved multiple upriver movements to secure major entrepôts and gateway centers such as Altar de Sacrificios, Seibal, Ucanal, Quen Santo, Chacula, and Chinkultic, among others (Sabloff and Willey 1967; Thompson 1970; Sabloff 1973; Adams 1973; Ball 1974, 1980; A. Chase 1985a; Kowalski, this volume). In the northern lowlands with the establishment of Chichen Itza, the “Itza” clearly sought control not only over commercial transport and import distribution but over the exploitation of local resources as well.

Seizing the roughly 340 km-long overland corridor between Chetumal Bay and Isla Carmen and forging it into an effective channel for commercial movement completed the “Itza” strategy. Their success in this undertaking is documented somewhat differently but no less clearly than that achieved in the southern lowlands and highlands as discussed by Kowalski (this volume). A series of entrepôt facilities were developed at already existing organizational centers extending across the peninsula from Aventura on the Bay of Chetumal to Guarixes, Isla Carmen (Fig. 2; Ball 1986). Ceramic trade wares and other artifactual exotica interlink these centers. These occur archaeologically in forms and depositional situations that closely approximate the expectations for “ports-of-trade” as formulated by Rathje and Sabloff (1975). Again, the senior author’s previous confusion of “Itza” and “Ytza” Itza (Ball 1986) resulted in misidentifying those controlling the *be Chakanputun* and misinterpreting its chronology, but the discussion of its character and operation remain sound.

“Itza” conquest of Champoton and seizure of the *be Chakanputun* either was effected by a descendant namesake of the Kakupacal commemorated in the inscriptions of late ninth-century Chichen Itza or it has been displaced chronologically, perhaps for the prognostic reasons discussed above. Had the “Itza” in fact “lost” the *be Chakanputun* in a Katun 8 Ahau (ca. A.D. 1185–1204), as is archaeologically plausible and traditionally reported (see below; Ball 1986; and Tozzer 1941: 20–21), it might well have seemed appropriate to Colonial era *chilams* to fix their original capture of it in the same *katun*. Certainly an earlier occurrence of this event would accord better with the highly pertinent scenario and supporting data presented elsewhere in this volume by Kowalski. Arlen Chase (1985a) also has recently provided iconographic evidence supporting what we would interpret as an “Itza” presence on the northeastern edge of the southern lowlands by 9.19.0.0.0 (A.D. 810). Given these several considerations, it seems likely that the *be Chakanputun* was seized by the “Itza” of Kakupacal as early as the first half of the

mented the continued use, maintenance, and modification of at least one complex (Str. III, Group A) from the late eighth or early ninth century on through the tenth and well into the eleventh or twelfth. As Carrasco points out, this accords far better with Ball’s (1977b: 134–136, 174–175) original chronological and historical evaluations of the Rio Bec Xocom ceramic phase than with any of the subsequently suggested modifications (Lincoln 1986; Ball 1986). We would agree and note further that Carrasco’s new Chicanna data provide important substantive support for both the chronology and the linked historical reconstruction suggested in this essay.

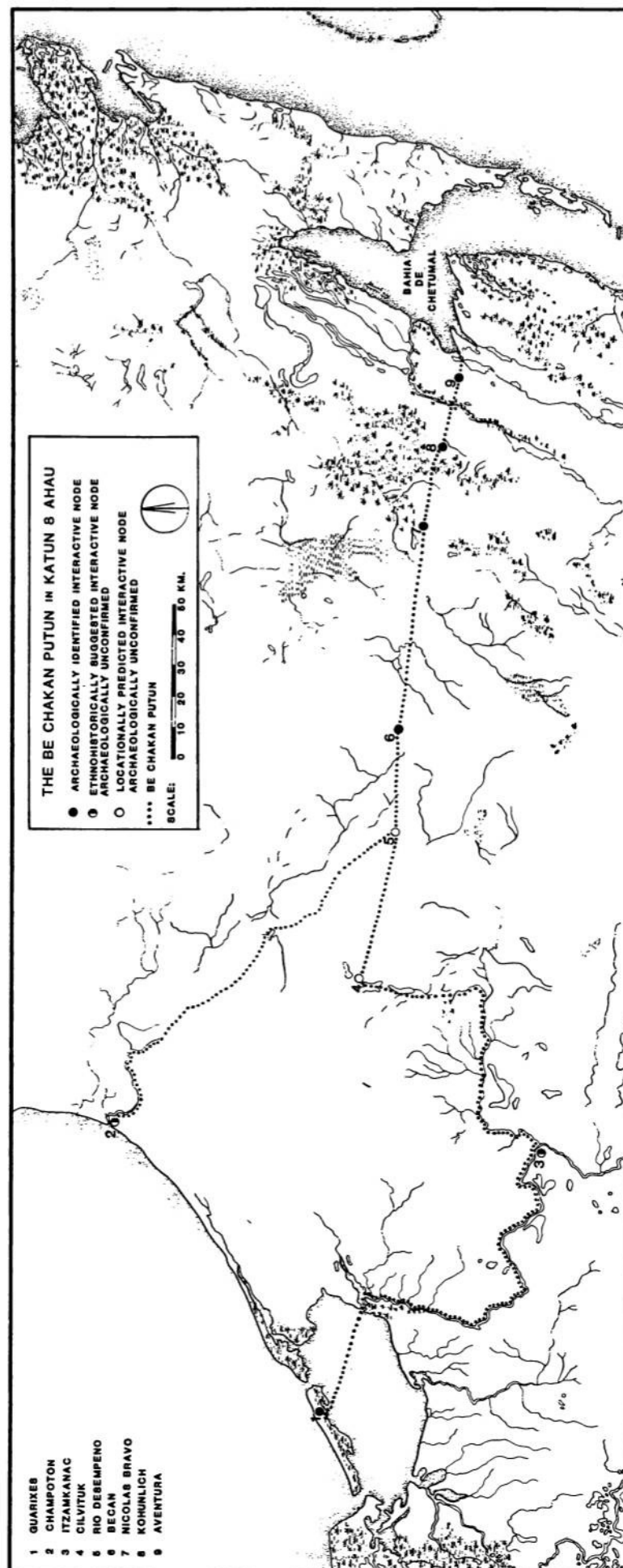


Fig. 2 Map showing reconstructed *be Chakanputun* in Katun 8 Ahau. Map by J. Taschek.

ninth century, a full hundred years earlier than recorded in the Post-Conquest chronicles and well before the senior author's previous placement of its effective Terminal Classic/Early Post-Classic operation.

The "Itza" arrived in northern Belize neither as conquerors nor refugees. Their goal was to secure a base of operations and port-of-transshipment on the Bay of Chetumal. Quite plausibly, this had to do not merely with transport economics involving development of a short, overland route of passage to the Gulf easily traversable year-round, but also with cutting off and economically strangling the competing Yucatec polity of Coba as well. This hypothesis has previously been advanced by A. P. Andrews and F. Robles (1985, 1986), and we find it to possess considerable merit.¹⁶ Were this indeed the case, the "Itza" proved highly successful.

The recently burgeoning archaeological record of northern Belize indicates the existence of at least two qualitatively distinct manifestations of the "Itza" presence there. At Nohmul (Hammond 1983), what might well have been an enclave center demonstrates architectural (Chase and Chase 1982; D. Chase and Hammond 1983) as well as ceramic (D. Chase 1982, n.d.) affinities to the northwestern peninsula. Some 20 km to its northeast and just 6 km in from Chetumal Bay, Aventura has yielded data suggesting its role as a transshipment entrepôt and probable eastern terminus of the "be Chakanputun" (Ball 1983, 1986).

Whether or not activities of a primarily administrative character were segregated from those of economic import at functionally differentiated centers, Nohmul and Aventura provide strong evidence for an "Itza" presence in the circum-Bahia de Chetumal region during Terminal Classic/Early Post-Classic times. Once again, the former middlemen and transporters were assuming the mantle of mercantile entrepreneurs.

Contact

"Itza" entrenchment in northern Belize had one additional effect which might or might not have been part of the original strategy. It established them in close geographical proximity to their Eastern Cholan "cousins," the "Ytza."

Seventh/eighth-century maintenance of direct contacts between the ruling families of the Western and Eastern Cholan by way of either the peninsula's coasts or an earlier version of the *be Chakanputun* is documented by nominative epigraphic data from Palenque, Guaymil, Isla Jaina, Xcalumkin, Copan, Chichen Itza, and Belize (Kelley 1982: 8–9; Schele and Miller 1986: 221). The circumstances and nature of their early ninth-century coming-together are possibly recorded on monuments at Caracol (Altars 10, 12, and 13; Stela 17), Machaquila (Stela 6), and Seibal (Stela 17) which show rulers of those centers expressing submission, friendship, or alliance to foreign individuals likely from the

peninsula's far north (A. Chase 1985a). If this is so, matters eventually were to change radically.

Another eventual result of the "Itza"–"Ytza" meeting was the famous "little descent" from the east by the "yala Itza," or "remainder of the Itza," recorded by Lizana (Tozzer 1941: 16) in the early seventeenth century and referred to in the Second Chronicle of the *Chumayel* (Roys 1933: 139). Following traditional "history," Andrews and Robles (1985) place the *Itza* incursion from the east near the end of the tenth century and argue that the Coba polity was still a force to be reckoned with when it occurred. We would broaden the possible range of their arrival time to extend from the mid tenth to early eleventh century on similar traditional grounds, but are otherwise inclined to agree with them.

By the early eleventh century, the "Ytza" had established themselves as a highly influential cultural force in northern Yucatan. The probable impact of their native upriver Belizean-northeastern Peten Red ware pottery traditions on the Post-Classic ceramic industries of Yucatan has been pointed out by Pendergast (1981). We would amend his speculations only to suggest that such influences might well have begun some two centuries earlier than he proposes and be reflected in the strikingly similar design style repertoires shared by the Lamanai Red wares (Pendergast 1981: figs. 15, 22, 26), Chichen Red ware (Brainerd 1958: figs. 82–87), and even Silho group Fine Orange paste ware (Brainerd 1958: figs. 77, 81–83). In this respect, although his intent was to argue a coastal Veracruz origin for it, George W. Brainerd (1958: 276) cogently pointed out some thirty years ago of the incised design style inventory shared by Silho Fine Orange and Chichen Red ware that, "since the incised pottery design of previous time horizons in Yucatan is known in some detail, it seems certain that few of the designs of this period are of local inspiration." Brainerd further noted that virtually no data exist to support an eastern Gulf coastal development for the style, and that, "whatever . . . the historical development of this design, it arrived at Chichen a well-integrated style, underlaid with solid conventions and showing ease and variety in its application." We suggest that it arrived with the "Ytza" from their eastern Peten-Belize homeland.¹⁷

The late ninth through early eleventh centuries also witnessed a complex series of small group movements involving the southwestern Gulf Coast, Chichen Itza, and Tula. The actors, directions, precise times, and circumstances of these remain controversial (e.g., Roys 1933; Tozzer 1941; Thompson 1970; Proskouriakoff 1970; Ball 1974; Kubler 1975; McVicker 1985), and cannot be resolved using the data now in hand. Post-Conquest traditions are clear on one point, however: on several different occasions both before and after the pivotal twelfth century, Mexican mercenaries from the southern Gulf Coast were brought into Yucatan by the lords of Ichpaa-Mayapan and Chichen Itza/Mayapan (Roys 1933: 155; Tozzer 1941: 21, 32–33). If we are to give any credence at all to these traditions and to the sculptural and mural evidence from Chichen Itza, we must

¹⁶The senior author implicitly dismissed this quite sound possibility in his recent misconstruction of *Itza* cultural history and chronology (Ball 1986). In particular, the assignment of a late ninth-century end for Coba's sociopolitical prominence may have been early by a good century or more. This question remains to be dealt with satisfactorily.

¹⁷It should be remembered that neither the absolute chronology nor even the relative temporal position at Chichen Itza of design-incised Red wares or Silho group Fine Orange pottery have yet been established.

accept this. Precisely which *Itza* faction was behind their introduction and for what real purposes remain open questions. Equally murky are the dominance relationships that developed among the groups involved at Chichen during the tenth and eleventh centuries. Sculptural and mural evidence does not exactly suggest a subservient position for the Mexican elements. If, as suggested above, Sotuta sphere ceramic diagnostics can be identified with "Ytza" elements, and pottery pertaining to the Cehpech sphere can be linked to native Yucatecan and "Itza" groups (Ball 1974, 1976, 1977a; Andrews and Robles 1985, 1986), then new stratigraphic and radiometric data from Isla Cerritos (Robles n.d.), Chichen's probable port facility (A. Andrews 1978), indicate that, by the late eleventh century, "Ytza" influences on the material culture and presumably the socio-political situation within that polity had effectively submergued "Itza" expressions in prominence.

We suggest that active rivalry for control over inter-regional commerce underlay the maneuverings of both factions. Taken together, both the final displacement of the old inland/overland riverine movement system by a circum-peninsular maritime one and the traditional Post-Conquest accounts of late twelfth through thirteenth-century events in Yucatan point to this.¹⁸

Conflict

The critical events of the twelfth century began with one whose nature is clear but whose real rationale is highly problematic.

1 Ahau: two hundred years *Chichen Itza* ruled. Then it was destroyed. Then they went to the settlement of *Champonon*, where there were then the homes of the *Itza*, . . . Katun 1 Ahau: 120 years they governed in *Chichen Itza* when it was destroyed causing them to establish themselves in *Champonon* where the *Itzas*, a believing people, lived. 1 Ahau was when the *yala Ah Itza* were driven out of *Chichen*. It was the third tun of 1 Ahau when *Chichen* was depopulated.¹⁹

The actual circumstances of the "Ytza" departure from Chichen are unclear. Their subsequent entrenchment at Champonon/Chakanputun (the site itself rather than the associated region in this instance) strongly suggests something other than headlong flight, however. In any case, the known archaeological record from Champonon precisely and accurately meets the expectations for a hypothetical arrival there of a late Sotuta complex-using group from the Chichen Itza locality (Ball 1978, 1985b, 1986). Once established, the "Ytza" maintained possession of this Gulf coastal foothold.

They arrived, and there their reign endured in *Chakanputun*.²⁰

¹⁸Here again the senior author's earlier (Ball 1986) discussion of these events was flawed by confusion of "Itza" and "Ytza" groups and consequent scrambling of the relevant chronology.

¹⁹*Tizimin, First Chronicle* (Edmonson 1982: 6); *Mani, First Chronicle* (Craine and Reindorp 1979: 138); *Chumayel, Third Chronicle* (Roys 1933: 141).

²⁰*Chumayel, Second Chronicle* (Roys 1933: 140).

Again, the known archaeological record from Champonon supports this (Ball 1978: 141–144).

"Itza" fortunes during the same (twelfth) century appear to have involved withdrawal and reentrenchment in the opposite direction.

8 Ahau. Destroyed was *Champonon*. . . . Then they came on and returned to their homes for the second time. They destroyed (or "lost," cf. Barrera 1948: 61; Brinton 1882: 145) the road of *Champonon*. . . . Then they came and established their homes again. Then they destroyed (or "lost," per above) the road of *Champonon*. 8 Ahau was when *Chakanputun* was abandoned by the *Itza* men. Katun 4 Ahau. . . . The settlement of the *Itza* shall take place. . . . Kukulcan shall come with them for the second time. . . . The *Itza* shall come.²¹

The "Itza" returned north, but not to Chichen Itza/Mayan. Instead, they regrouped in the province of Mani to Chichen's west where they established a fortified successor to Chichen Itza/Mayan, Ichpaa-Mayan, in Katun 4 Ahau (A.D. 1224–44). There they were joined by other "Itza" who had abandoned or been driven from Chichen during the same previous Katun 8 Ahau (A.D. 1185–1204). This abandonment was later confused and combined in traditional histories with fifteenth-century Katun 8 Ahau (A.D. 1441–61) events involving the expulsion of reestablished "Ytza" elements from Chichen through the machinations of Hunac Ceel, probable leader of the Canul mercenary forces brought into Yucatan from Tabasco by the Cocom ("Itza")²² lords of Ichpaa-Mayan in Katun 1 Ahau (A.D. 1382–1401) (Roys 1933: 155; 1962: 47, 80; cf. Roys 1933: 141 and Edmonson 1986: 61).

In conclusion, the thirteenth century saw Cholan Maya Itza of both western and eastern divisions established in Yucatan as commercial competitors and political opponents. Entrenched at fortified Ichpaa-Mayan were the Cocom-"Itza," heirs to the inland riverine movement-marketing system rooted in the Teotihuacan-dominated Early Classic past. They were heirs also, it should be remembered, to a long tradition of direct interaction with Mexican and Mexicanized Maya peoples in their original Chontalpa homeland.

Contesting "Itza" commercial power were the Peten-derived "Ytza," who by A.D. 1200 had established themselves at Champonon, Isla Cerritos, Tulum (Barrera R. 1985), and Ichpaatun (see Smith 1970; Sanders 1960 for ceramic evidence) while continuing to maintain major home bases at such centers as Santa Rita Corozal (D. Chase 1982, 1984) and Lamanai (Pendergast 1981). Available ceramic (A. Chase 1985b) and obsidian source data (Rice et al. 1985) suggest their interaction with the Post-Classic inhabitants of

²¹*Tizimin, First Chronicle* (Edmonson 1982: 7); *Chumayel, First Chronicle* (Roys 1933: 136); *Chumayel, Katun-prophecies* (Roys 1933: 161).

²²The senior author has elsewhere suggested (Ball 1986) that the Cocom might better be designated the Cocom-Itza, and that they can be associated nearly as well with Chichen Itza as with Ichpaa-Mayan (ibid.: note 3). In this light Ralph Roys (1962: 48) similarly conjectured "that the Cocom . . . were descended from people who had once called themselves Itza."

the eastern and central Peten as well. They also appear to have reestablished themselves at Chichen Itza sometime between the thirteenth and fifteenth centuries.

The Post-Classic interplay between the maritime-oriented "Ytza" and the inland/riverine-oriented "Itza" together with their series of imported mercenaries from the southern Gulf Coast remains at this time more in the provenance of subjective ethnohistoric interpretation than that of objective archaeological verification. We hope that the next decade will see field efforts oriented toward resolution of the complex events that transpired during the centuries between A.D. 1200 and 1500 in the Northern Maya Lowlands. These continue to represent a serious deficiency in our control over late Maya prehistory and thus the processes therein. What can be stated with certainty, however, is that the Post-Classic emergence of the *Itza* as major mercantile powers was but a legacy of their much earlier commercial role within the greater political economy of Teotihuacan.

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From Centralized Systems to City-States: Possible Models for the Epiclassic

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SOCIAL SCIENTISTS have long been interested in the fall of civilizations and the breakup of powerful, centralized, expansionist states. Explaining the collapse of early states and discovering some of the processes that led to the disintegration of centralized polities have been among their major concerns. Complicating the analysis is the fact that while some civilizations (such as the Classic Maya) may collapse and then show limited recovery, there are other civilizations whose centralized polities do not collapse completely but rather are transformed into a different type of government.

Most scholars have devoted more attention to the "rise and fall" of civilizations than to the processes that subsequently led to a reorganization of the population remaining in their territories. And relatively few archaeologists have studied the processes of dissolution, recovery, and reorganization, preferring instead to study the "golden ages" of ancient civilizations, when those societies were "in full flower."

Processes leading to dissolution include (1) invasions by other ethnic or political groups; (2) a weakening of the state's ability to maintain its borders and protect the people in outlying regions; (3) an overextension of the state's political and economic resources; (4) a decreasing ability to control newly incorporated groups and rival populations; (5) an increasing inability to legitimize continuous territorial expansion as the distances and rivalries of incorporated ethnic groups increase; and (6) an inability to maintain previous alliances without major factions splitting off and becoming unexpected competitors.

Two of the processes that may lead to a reorganization of territory following the breakdown of a centralized state are (1) new alliance formations (including marriage alliances, military defense leagues, or political confederacies) in which two or more polities unite for a common goal, and (2) a dispersal of the elite (and their specialized staff and supporters) away from former population centers into

other localities, sometimes resulting in the growth of new centers at the expense of old ones.

One of the forms of government that often occurs after the dissolution of a centralized state is the system of multiple, autonomous polities often referred to as "city-states." Scholars are not in agreement as to whether the appearance of city-states constitutes (1) the return to a stage reached prior to the emergence of a state (what some scholars might call a "devolution"); (2) a new adaptation, not seen previously; or (3) a situation in which the superimposed top level of an administrative hierarchy has been removed. Individual cases sometimes provide different answers to questions such as: Is the readjustment cultural, ideological, economic, or some combination of the three? Are there new political and military realignments? Is the breakdown actually a process of elite decentralization, whereby the ruling group disperses until its individual members gain the opportunity to administer autonomous polities? Are many of the full-time specialists who had formerly worked in the capital now dispersed to a number of different smaller centers?

"City-states" have appeared in many parts of the world which are widely separated in space and time (e.g., Renfrew 1979, Snodgrass 1980). The Etruscan city-state leagues, Anatolian post-Hittite polities, Greek *poleis*, and Egyptian *nomes* are all examples, as are the *curacazgos* of ancient Peru, the *señoríos* of the Basin of Mexico, the *cuchcabalob* or provinces of the Yucatan peninsula, and the *cacicazgos* of the Mixteca Alta. In addition to their widespread distribution, city-states seem to display significant diversity, flexibility, and adaptability.

Since the "Epiclassic" period to which this volume is devoted also is thought to have witnessed the breakdown of centralized political systems and the subsequent reorganization of their territories by the remaining inhabitants, it may be useful to look at three different cases: Post-Classic Yucatan, Mycenaean Greece, and the "Epiclassic" Valley of Oaxaca. The first two cases involve societies distant in time or space from the cultural and political adjustments taking place in Central Mexico and much of Mesoamerica following the fall of Teotihuacan. The third case—the Valley of Oaxaca from A.D. 600–900—falls squarely in the

I thank Richard Diehl for requesting this paper and John O'Shea for providing some very useful comments.

period of concern for the authors of this volume. It is my hope that by looking at these three cases we may find cross-cultural regularities that could, in turn, provide us with a better model for the "Epiclassic" in Central Mexico.

THE RISE OF CITY-STATES IN YUCATAN (A.D. 1450–1600)

From ca. A.D. 1250–1450 Mayapan served as the Post-Classic capital for the Yucatan peninsula. The Maya themselves referred to Mayapan's form of government as *mul tepal*, a term that can be translated "joint rule" or "joint government." *Mul tepal* resulted from having the local lords of different Maya lineages live together in one capital. This nucleated set of rulers residing in Mayapan provided centralized political authority without obliterating distinctions among lineages.

Mayapan appears to have begun as a fairly minor ceremonial center dedicated to the worship of Kukulcan. Its principal temple was apparently a copy (albeit on a much smaller scale) of another temple dedicated to Kukulcan, the so-called "Castillo" at Chichen Itza. Other buildings surrounding this small-scale temple at Mayapan seem also to replicate the design, layout, and function of structures surrounding the Castillo at Chichen Itza. Significantly, this complex of structures was the first built at Mayapan, while all the residential areas at that site appear to be later additions. In several respects, Mayapan maintains the cultural and political patterns established earlier at Chichen Itza, a fact that is not surprising since the founding of Mayapan came hard on the heels of Chichen Itza's decline in A.D. 1221.

While Mayapan had fallen by the time of the Spanish Conquest, colonial documents speak of a time when the whole of Yucatan had been under its rule. As early writers put it:

previously [the region] had been subject to one supreme lord and king, and thus ruled by a monarchical government, until the disloyalty of some subjects caused the division in which it was found; and then all this land was called Mayapan from the name of the principal city, where the king had his court. (López de Cogolludo 1867–68 [1688]: bk. 2, chap. 1)

a very populous city once existed called Mayapan, in which all the caciques and lords of the province of Maya resided and there they came with their tribute. Among these were two principal ones, to whom the others acknowledged superiority and vassalage and for whom they had great respect, one was called Cocom and the other Xiu, and the old Indians say that the Xiu, helped by the other lords (*principales*), killed the Cocom, who was a greater lord and more important than he, and to do it he enraged them against him, telling them or making them believe that the Cocom was secretly selling the native Indians to foreign traders. With the death of the Cocom the city of Mayapan was abandoned, the Xiu and those of his family and faction remaining in Mani. . . . The other caciques . . . went to their lands, leaving the city of Mayapan deserted. (Ciudad Real 1873: bk. 2: 470–471; Noyes 1932: 354–355)

While the exact extent of the territory administered by Mayapan is not certain, at least two sources (López de Cogolludo 1867–68; Chi 1941: 230–231) indicate that all of the peninsula was under its rule.

These lords of Mayapan held in subjection [subjugation] the entire (country, and) the natives of it were tributary. . . . The tribute (consisted of) small sheets of cotton, native hens [turkeys], honey, (cacao and) a resin which served as incense in the temples and sacrifices. (Chi 1941: 230)

Roys (1957) indicates that Mayapan controlled all the provinces that extended from Ah Canul on the west to Cupul, Tases, and Cochuah to the east, with possible control over Uaymil and Chetumal on the southeast (Fig. 1). Chikinchel, Ecab, and perhaps Chanputun may have been outside Mayapan's direct control; nevertheless, there is extensive evidence for trade between Mayapan and the east coast of the Yucatan peninsula and with areas of Tabasco and Campeche.

Mayapan was a walled city of 10,000–12,000 inhabitants who occupied an area slightly greater than 4 km². Over two thousand residences and a hundred ceremonial structures have been mapped within the walls (Pollock, Roys, Proskouriakoff, and Smith 1962). The center of the site includes the main group of temples and other public buildings; close to the center were the lords' residences, and

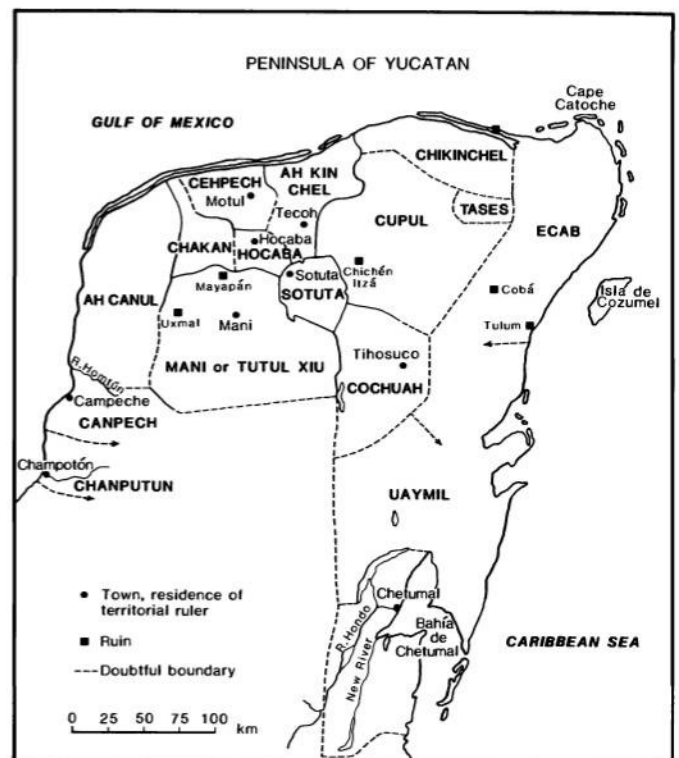


Fig. 1 With the end in A.D. 1450 of the "joint government" (*mul tepal*) administered by Mayapan, the Yucatan peninsula was divided into sixteen or more territorial jurisdictions. These polities varied significantly in territorial size, population, and political organization (redrawn after Roys 1957: 2).

radiating out from there to the city walls were the residences of the other inhabitants. This pattern of concentric zones—whereby the status of the inhabitants decreases as one proceeds away from the site center—was described by Landa (Tozzer 1941: 62) and is characteristic of many Mesoamerican cities (Marcus 1983a: 199–200).

The Collapse of Mayapan

Landa states that the fall of Mayapan resulted from political dissension brought about by the oppression of some rulers who were members of the Cocom lineage. The Cocom had unwittingly sown the seeds of their own downfall by bringing in Mexican mercenary troops, the Ah Canul (“protectors” or “guardians”) from Tabasco. With the aid of these Mexican warriors, the Cocom were able to tyrannize rival Maya. Some other lords living at Mayapan, including members of the (Tutul) Xiu lineage, conspired to kill off all the Cocom lords. They were so successful that only one Cocom lord escaped death; he happened to be away at the time, participating in a long-distance trading expedition to Ulua, Honduras.

As a result of this Xiu revolt, Mayapan was burned and abandoned, and rapid depopulation followed. Mayapan’s end was apparently violent and abrupt, with evidence for the burning of buildings and widespread looting. Some of the chronicles also mention a “pestilence” that occurred after the fall of the capital. All the lords that had formerly congregated in Mayapan now returned to their own provinces.

The Sixteen Cuchcabalob of Yucatan

Following the dissolution of the *mul tepal* administered from Mayapan, the Yucatan peninsula came to be divided into sixteen or more territorial divisions that have been called “city-states” or “provinces” (*cuchcabalob*, the Maya term for “jurisdictions”).

Among these sixteen *cuchcabalob* there existed three different types of government. Some provinces had a *halach uinic* (or “real man”) who administered his own town (as a *batab* or local administrator) as well as the entire *cuchcabal*. The *halach uinic*’s position was hereditary, often passing from father to son, otherwise from brother to brother (Roys 1943: 60). One of his important duties was to inspect the boundaries of his province. He also exacted tribute from subject towns, declared war, and drafted men from within the province into military service. City-states with this type of government included Tases, Mani, Sotuta, and Cochuah (Fig. 1).

A second type of government consisted of a group of towns within the city-state that was administered by members of the same patronymic or “name group.” For example, the Ah Canul and the Cupul ruled their provinces as a kind of confederacy linked by kin ties.

Still a third type of government can be seen in a loosely allied group of normally independent towns that united during times when they needed to ward off their competitors or when they wished to avoid being incorporated into other provinces.

During the sixteenth century many of these sixteen

cuchcabalob were fighting with one another, usually over boundary disputes. Underlying many such disputes were attempts to gain access to resources that could not be obtained within one’s own province. For example, landlocked polities were often eager to establish alliances with coastal ones, but this depended on peaceful relations. For example, “the Chel, who lived on the coast would not give fish nor salt to the Cocom, making him go a long distance for it; while the Cocom did not permit the Chel to get any game or fruit” (Landa, in Tozzer 1941: 40).

Boundary trespassing and raids were instigated for the purpose of obtaining captives for sacrifice, to serve in a lord’s household, or as labor on public works projects. Significantly, this raiding between provinces was carried out when most of the male population had little or no agricultural activity to complete, that is, from November to January. Raids were frequently preceded by intimidating noises, such as those made by beating on turtle carapaces with deer antlers or by blowing conch shells or whistles (Francisco de Cárdenas Valencia [1639], in Tozzer 1941: 49 note).

Rivalry was commonplace among elite members of different lineages, each of whom administered a “city-state” or province of its own. However, there were times when one lineage asked a favor of another. On one occasion in A.D. 1536, a member of the Xiu lineage (the great-grandson of the man who overthrew the Cocom rule of Mayapan) wanted to travel from his capital at Mani to make offerings at the famous Cenote of Sacrifice at Chichen Itza. In order to reach the cenote, this Xiu lord had to pass through the territory of Nachi Cocom, ruler of Sotuta (and a descendant of the Cocom lord who had been away trading in Honduras when all the other Cocom lords had been killed at Mayapan by the Xiu). Nachi Cocom granted the Xiu lord permission to pass through his territory; for three days he wine and dined the entourage of forty Xiu pilgrims, and then on the fourth day the Cocom killed them all. This new act of betrayal further split the two powerful lineages of northern Yucatan, so badly that they were unable to band together as a unit to fight against their common enemy, the Spaniards.

THE RISE OF CITY-STATES IN GREECE (800–500 B.C.)

Following the collapse of the centralized Mycenaean palace societies in Greece, there is evidence for extensive depopulation and for the emergence of a new type of political organization, the *polis* or city-state. Separating these two periods is the so-called “Dark Age” of Greece.

Mycenaean Kingdoms

The beginning of the great period of Mycenaean hegemony appears to coincide with the destruction of Knossos in the first half of the fourteenth century B.C.; prior to this, Knossos had been the principal regional center on the island of Crete. By 1350 B.C. the height of the Mycenaean palace societies had been reached. These societies carried on extensive reciprocal long-distance trade with centers in central Europe and in the eastern and central Mediterranean. There was reciprocal exchange between the elites at different centers, but there was also a more “commercial” trade operating among

commoners. Mycenaean palaces are often large complexes of buildings that include storage facilities and quarters for the monarch. Palaces also appear to have served as centers of regional administration, both economically and politically. Palaces occur at Thebes, Athens, Pylos, and Mycenae. The palace of Mycenae would have been the most lavish of all the royal residences, since it was located in the chief city of all the principalities of Greece (Taylour 1964: 89).

Mycenaean kingdoms were administered by a monarch (or "king") who lived in a palatial residence. During the heyday of the thirteenth century B.C., this residence was usually protected within the walls of a fortified citadel, whereas the commoner population lived outside the town walls. The monarch regulated the production and distribution of goods within his kingdom, which included not only his fortified capital but also smaller towns which were hierarchically below it. For example, Tiryns might have been a dependency of Mycenae.

Mycenaean civilization was highly stratified, with an elaborate system of land ownership, a road network, armed forces, a writing system, well-developed craft specialization, and a system of production and taxation (Snodgrass 1980: 15). Eventually, however, the Mycenaean kingdoms began to decline during the late twelfth and early eleventh centuries B.C. Intensive competition and warfare appear to be important factors in this decline.

The Greek "Dark Age" (ca. 1100–800 B.C.)

From the late eleventh century to the late tenth century B.C., the area that had formerly witnessed the heyday of Mycenaean civilization was now isolated from the rest of the world and severely depopulated (Snodgrass 1971). There were no sizable towns or urban centers, apparently few crafts produced (other than pottery), a complete cessation in temple construction, and a cessation in the use of writing. Some scholars (e.g., Snodgrass 1977, 1980) have characterized the remaining population as a group of pastoral nomads operating at a level of organization in which family, clan, and tribe were the important units. This type of organization is similar to the *ethnos* which characterized much of central and northern Greece and southern Italy in the eighth century B.C.

The *ethnos* was a political unit usually without any powerful central authority or urban center. The Samnites, who consisted of a group of rural communities each with an elected leader, can serve as an example. There was no permanent military leader, but when needed such a person could be elected to mobilize an army (Champion et al. 1984: 259, 261).

The Rise of the Greek Polis or City-State

After 800 B.C. Greece experienced a substantial increase in population, accompanied by the reemergence of the urban center. One surprisingly early example was Old Smyrna, which was apparently fortified and nucleated as early as 850 B.C.

In addition to the *ethnos* which persisted in many areas, a new type of government, the *polis*, appeared in others (Fig.

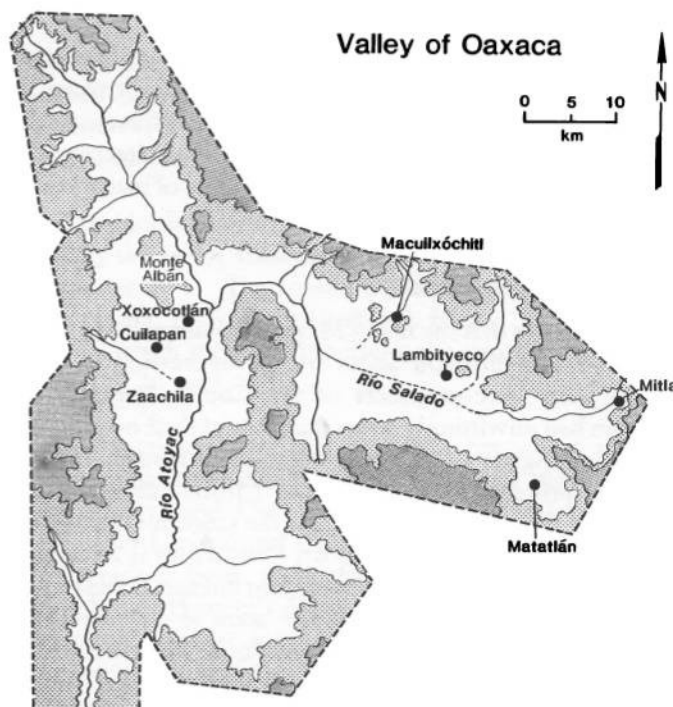


Fig. 2 Shaded areas indicate the extent of the *polis* or "city-state" type of government, while the unshaded areas were characterized by the *ethnos*, a political unit without powerful central authorities or urban centers (redrawn after Snodgrass 1980: 45).

2). The Greek term *polis*, or "city-state," refers to a self-sufficient, autonomous polity in which the activities of the "church" and the "state" are wedded, unlike our modern states or local governments. For Plato or Aristotle the *polis* was considered to be an ideal form of community, precisely because it was self-sufficient. Also, ideally, there was supposed to be a complementary relationship between town and countryside (Snodgrass 1977: 18).

The Classical *polis* was thus quite different from its distant ancestor, the Mycenaean kingdom (Snodgrass 1977: 7). As we have seen, a number of towns fell under the rule of one Mycenaean monarch, his palace exercised tremendous control over production and exchange within his kingdom, and the palace was usually located within a well-fortified citadel with much of the settlement lying beyond the walls. In contrast, the majority of towns and villages in the *polis* system had a high degree of autonomy and very little economic control over their citizens. When present, any fortifications protected all the citizens, not merely the ruler. Significantly, the temple structure was usually the focus and outstanding architectural feature of a *polis* (Snodgrass 1977: 8). In fact, the construction of a monumental temple dedicated to a recognized patron deity was the physical evidence that a *polis* had come into being (Snodgrass 1977: 24).

The emergence of the *polis* was accompanied by other changes which included the emergence of small landholders, the adoption of coinage, the appearance of an alphabetic script, and new military strategies. One of the characteristics considered fundamental in this new type of political system was the competitive relationship between individuals and groups, which apparently led to further conflict

between city-states (Champion et al. 1984: 266). Nevertheless, elite marriage alliances could often link city-states, and once allied, these confederacies could unite their military forces for the purpose of subjugating other people, thereby at least temporarily expanding their political domain and tributary population.

THE RISE OF CITY-STATES IN OAXACA (A.D. 600–900)

The hilltop city of Monte Alban was established by 500 B.C. at the intersection of all three arms of the Valley of Oaxaca, and it grew to 6.5 km² with a population of at least 30,000 before A.D. 600 (Blanton 1978). At its peak more than two thousand residential terraces were contoured to the slopes below its Main Plaza. As a regional capital, Monte Alban administered an extensive domain whose frontiers lay outside the Valley of Oaxaca (Marcus 1980, 1983b; Spencer 1982; Redmond 1983). Additionally, from roughly 500 B.C. until A.D. 600,¹ Monte Alban had a near monopoly on hieroglyphic writing within the valley.

With the decline of Monte Alban as a regional capital for the Valley of Oaxaca after A.D. 600, we enter a new period characterized by ideological adjustments, political realignments, and social transformations. Rather than call this new era “the Epiclassic” I have described this time as one of “changing politics” (Flannery and Marcus 1983: 183). Among the changes that took place after the decline of Monte Alban at least two are significant here, primarily because they contrast so clearly with what preceded them.

The first is the emergence of a set of valley-floor sites that appear to have taken over the political control of sectors or subdivisions of the valley. These valley-floor centers were not all newly founded after the decline of Monte Alban; rather, most of them had been continuously occupied for hundreds of years, albeit at a lower population level. Some of the sites that became important seats of political power during this era of “changing politics” were Cuiclan, Zaachila, Xoxocotlan, Lambityeco, Mitla, and Matatlan (Fig. 3). With the decline of Monte Alban, these communities, which had formerly been secondary or tertiary centers, seem to have become the most important administrative centers in the valley in Period IV.

A second change is that Monte Alban no longer had a near monopoly on writing. The valley-floor centers mentioned above had apparently gained the necessary scribes and stone-monument carvers to record their own political events in hieroglyphic writing, and even though they con-

¹My chronology for the rise and fall of Monte Alban is based solely on dates from the Valley of Oaxaca, that is, those accompanied by an (M) for Monte Alban or a (T) for the Tlacolula district, in Figure A.2 of Drennan (1983). Included are one Monte Alban IIIa date of A.D. 350 and six Monte Alban IV dates between A.D. 640 and 755. I have been careful not to include any dates from the Nochistlan Valley—those accompanied by an (N)—since they come from the Ramos, Las Flores, or Natividad phases of the Mixteca Alta, and date Tan, Orange, or Rust were complexes unrelated to Monte Alban. In retrospect, we should have asked Drennan to put all these Mixtec dates in a separate chart, so the reader would not be confused into thinking that they came from any of the Monte Alban phases. Such confusion has recently led to Santley and Arnold's (1984) error of attempting to construct a “new” chronology by lumping Mixtec and Zapotec dates. The dates are from completely different regions, phases, ethnic groups, and ceramic assemblages, and should never have been combined, either by us or by Santley and Arnold.



Fig. 3 After the political collapse of Monte Alban around A.D. 600, new administrative centers took over the control of various sectors of the Valley of Oaxaca; some of those newly emerged powers are shown here.

tinued to follow the Zapotec stylistic conventions in writing that had been established at Monte Alban, the size and thematic content of their monuments began to change. Instead of huge carved monuments like those publicly displayed in the Main Plaza at Monte Alban from A.D. 200–600, the artisans of the “Epiclassic” concentrated on the small carved stones that I have elsewhere called “genealogical registers” (Marcus 1980, 1983c). These registers refer to members of royal families, give the names of their parents and grandparents, record their births and royal marriages, and describe other “life crisis” events. Since all those found in situ have come from tombs, it is likely that their small size reflects the fact that they were to be read close up, rather than seen from afar like the huge Classic monuments of Monte Alban. Surely one of their primary purposes must have been to make crucial genealogical data permanent in stone.

One of the legacies of the Zapotec “Epiclassic” was this interest in recording dynastic and genealogical data. Because Monte Alban had apparently ceased to be the uncontested capital of the Valley of Oaxaca by A.D. 600, and political power had shifted to a whole series of valley-floor centers, it is perhaps not surprising that the nobles dispersed throughout the valley were so concerned with genealogy and marriage alliances. The stone “registers” kept in the antechambers of the tomb probably served to legitimize their claims to rulership and formalized their marriage ties with other emerging polities in the Valley of Oaxaca.

The establishment of small, probably competitive polities or *caciazgos* in the Valley of Oaxaca during the period

A.D. 600–900 may be analogous to some of the events in Central Mexico following the decline of Teotihuacan. In the “Epiclassic” of that area, complex iconography and writing appear at centers such as Xochicalco (see Berlo, Chapter 2; Hirth, both this volume) and Cacaxtla (see Nagao, this volume). Formerly, Teotihuacan had seemingly held a near monopoly on complex iconography and monument building similar to the situation described for Classic period Monte Alban.

The elaborate defensive works at Xochicalco suggest that competition between polities may have included armed aggression. It is likely that this period saw tremendous jockeying for power, many ephemeral alliances, and frequent genealogical disputes in both Oaxaca and Central Mexico. One of the major questions remaining to be answered for both areas is the origin of the local elites who ran the “Epiclassic” city-states. Had the old elites from Monte Alban and Teotihuacan been dispersed through these newly ascendant local centers, or are we dealing with local elites who had simply been waiting to take advantage of their capital’s decline? Or, more complicated still, had local rulers raised their status still further by marrying old elite emigrants from the capital? We do not know.

As we have seen, the “Epiclassic” in the Valley of Oaxaca represents a changed sociopolitical environment in which one of the concerns of the Zapotec elite became the affirmation of their royal status, and this resulted in the arranging of politically advantageous marriage alliances among valley-floor sites. By the use of stone genealogical registers, the “Epiclassic” Zapotec accomplished some of the same things their Post-Classic Mixtec neighbors did much later with their genealogical codices (Marcus 1983d: 359). Like the Mixtec codices studied by Caso (e.g., 1949, 1960, 1977, 1979) and Smith (e.g., 1963, 1973, 1983), among others, the Zapotec genealogical registers record a “local” or “regional” point of view. Additionally, some of the Zapotec registers were laid out in boustrophedon style, similar to the later codices.

Another legacy of the Zapotec “Epiclassic” was the *cacicazgo*, or city-state, which in one variant or another persisted in both the Mixteca Alta and the Valley of Oaxaca, except for the brief period when 8 Deer “Jaguar Claw” united the two Mixtecas, Alta and Costa. The stability of the *cacicazgo* system may lie in the fact that multiple small units were more strongly buffered from perturbations in sister units than a more centralized system, such as the one seen at Mayapan.

CONCLUSIONS

We have seen that in both the Old and New Worlds, there seem to be a number of instances in which the breakup of a major polity is followed by the division of its former territory into a series of smaller city-states. Frequently these city-states are intensely competitive with one another and are able to create ephemeral moments of peace only through marriage alliances. Despite the constant jockeying for power among its units, the overall network of city-states may endure for a long period of time, one that

would appear relatively “stable” when viewed in the context of the archaeological record.

Occasionally one city-state will rise to dominate others; for example, Rome, which was just one of many city-states until the end of the fifth century B.C., rose to dominate its neighbors in the fourth century and by the end of the third had united all of the Italian peninsula (Champion, Gamble, Shennan, and Whittle 1984: 266). Just as often, however, the balance of power between city-states is such that none ever fully gains the upper hand; this seems to have been the case with the Post-Classic Mixtec *cacicazgos*, except for one brief moment of partial unification by 8 Deer “Jaguar Claw” of Tilantongo (Caso 1979). Indeed, the Mesoamerican “Epiclassic” would seem to have been a time when many city-state systems evolved out of broken-down nucleated urban “Classic” civilizations.

One possibility often overlooked is that some of the “Classic” polities may have been formed originally by confederacy and that rivalries among members of the confederacy may have been the cleavage planes along which the nucleated polity eventually fractured. We know that Mayapan, for example, was occupied by lords of different lineages drawn together from a number of provinces to form a *mul tepal*, and when Mayapan fell each of these lords returned to his province to administer his city-state or *cuchcabal*. Proskouriakoff (1962: 90) has suggested that each of the seventeen or so major colonnaded “halls” (or “men’s houses”) at Mayapan might have served the nobility of each of the provinces represented at the capital. In the case of Monte Alban, Blanton (1978: 69, 107–108) has suggested (1) that the city was founded by a confederacy of formerly competing chiefdoms from all three arms of the Valley of Oaxaca, and (2) that even as late as Period IIIB the city might have been divided into fourteen residential wards each of which maintained a building on the Main Plaza, ultimately representing fourteen powerful lineages from different areas of the valley. When Classic Monte Alban “fractured,” it may have done so much as Mayapan did, with former confederacy members returning to their own administrative centers at places such as Cuilapan, Zaachila, Lambityeco, Mitla, and elsewhere.

In other words, we should consider the possibility that the degree of centralization and stability of some “Classic” state systems may not have been as complete as we archaeologists have imagined. Rather, internal factions, competitive royal lineages, political tensions, and growing rivalries may have been present all along, but these sources of instability are often difficult for the archaeologist to detect, especially if his research focuses principally on the center of the system—the capital—and not on its provinces.

If the political systems administered by such capitals as Teotihuacan, Monte Alban, or Mayapan were not as stable or as completely integrated as we have assumed, it might be easier to explain the processes of dissolution, recovery, and reorganization following their collapse. If lower-order centers retained a fair degree of autonomy in some matters (a situation not always imagined within a state or empire), the appearance of multiple city-states following the col-

lapse of the highest-order center might be less surprising. And if we have underestimated the amount of rivalry and internal conflict among elite lineages, and the presence of powerful factions within the capital, the "collapse" of a Classic civilization may not be as mystifying an event as the devotees of "lost civilizations" would have us believe.

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The Concept of the Epiclassic: A Critique

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SEVERAL OF MY COLLEAGUES in this volume persist in using the temporal designation "Epiclassic" in discussing events that transpired throughout Mesoamerica between A.D. 700 and 900. Within the past twenty years this term has been added to the ever-increasing list of chronological and developmental labels used in Mesoamerican archaeology. From Formative to Florescent, Proto-Classic to Proto-Post-Classic, Middle Classic to Middle Horizon, we have been inundated with new terms pinned to old problems in the hope of clarifying the events that took place in these time periods.

Sometimes these terms reflect the regional or temporal partisanship of their originators. Certainly this was true for the widely used Pre-Classic, Classic, and Post-Classic schema that reflected the interests of North American Mayanists in the 1940s and 50s. More recently, Mesoamericanists have staged a revolt against the Maya bias of the traditional terminology. This has engendered a new temporal and developmental vocabulary (see Jiménez Moreno 1966; Millon 1976; Paddock 1966; Parsons 1969; Pasztory 1978; Price 1976).

The term "Epiclassic" was first proposed by Wigberto Jiménez Moreno in 1959 (published in English with slight revisions in Paddock 1966). He gives no reason for adopting this particular term, admitting that it encompasses the same time frame as what is more commonly called the Late Classic (1966: 49). Perhaps he chooses a new chronological term to highlight developmental processes that he sees as fundamentally different from what came before: "In this period, the Classic world, with its deep rooted civilization and theocratic tradition disintegrates and the historic Olmec and Toltec empires, newer cultures characterized by a strong militaristic tendency, appear. A great crisis shakes Mesoamerica from end to end, and in the midst of chaos a new world germinates. There is a profound change in cultural orientation" (1966: 49). This interpretation is based on the outmoded view of Teotihuacan as a theocratic center. While admitting that Teotihuacan "established the patterns and spread the routes that were to last in Central Mexico for centuries" (1966: 50), he sees this as fundamentally a peaceful process, in contrast to what came after. Yet since Jiménez Moreno wrote this, we have learned a great deal about Teotihuacan and its economic empire. The di-

rected resettlement of thousands of people within the Valley of Mexico (Sanders et al. 1979), the ubiquitous association of Teotihuacanos with militaristic iconography outside the city (Ball 1974; Coggins n.d.; Berlo 1983, 1984), and the upsurge in militaristic themes in the art of metropolitan Teotihuacan during Xolalpan times (figurines and mural programs such as Atetelco) suggest that the fundamental change in "Epiclassic" times was not from theocracy to militarism. Instead, the fundamental change was simply in who wielded the reins of economic and military power. The rise of competing city-states like Xochicalco and Cacaxtla after A.D. 700 suggests that as Teotihuacan declined, the small centers modeled themselves in part on a Teotihuacan system of control of goods and commerce, meanwhile announcing their ideological importance with public programs of monumental relief sculpture (Xochicalco) and mural painting (Cacaxtla) attesting to their right to rule.

Malcolm Webb (1978) follows Jiménez Moreno's use of the term Epiclassic. In doing so, however, he provides more sophisticated models for the rise of competing states. Webb, like Jiménez Moreno before him, sees Teotihuacan as maintaining Olmec patterns of theocracy and sumptuary trade (1978: 160-161). Yet his defining characteristics of Epiclassic states are true as well for Teotihuacan, the one major state that preceded all of these and upon which at least some of these smaller polities may have been attempting to model themselves. These definitions include "an increased appetite for and ability to secure over a wide area goods which were pragmatically useful" and "the ability to develop higher levels of economic specialization" (1978: 160). Indeed, Teotihuacan's level of economic specialization may have been unmatched in the Mesoamerican world until the late Mexica state.

Both Jiménez Moreno and Webb have called attention to patterns and processes in Mesoamerican prehistory that are worth our examination (although, as I have indicated, both seem to have a limited view of the nature of the Teotihuacan polity). Lee Parsons (1969) and Esther Pasztory (1978) have also charted the changes wrought by Teotihuacan in its periods of expansion and retraction of influence. Though I disagree with their compression of all significant events in the history of Teotihuacan, Cotzumalhuapa, El

Tajin, Xochicalco, etc. into the Middle Classic period, I agree with the processes they outline of Teotihuacan influence followed by absorption and adaptation of Teotihuacan ideas (both economic and artistic) in the several cultures that grew as Teotihuacan waned.

The chronological scheme developed by Barbara Price, based on an Andean model of horizons (1976), most successfully reveals the nature of such patterns. Teotihuacan's distinctive world view and economic system dominated Mesoamerica during the Middle Horizon, as it brought many areas into its web of commercial and ideological influences. The first phase of the Second Intermediate period (750–950), however, marked the diminution of Teotihuacan's power and the rise of small competing city-states, not only in Central Mexico but throughout Mesoamerica, as described by Webb (1978) and others (see Marcus, this volume, for a discussion of the Mesoamerican city-state). A chronological scheme based on the alternation of broad culture horizons with intervening periods of competitive regionalism more accurately charts the expansion and contraction of civilizations that we know occurred in Mesoamerica before the Spanish Conquest. The retailoring of the "Classic" terminology into Middle Classic, Epiclassic, Proto-Post-Classic, and so forth is at best a stopgap measure. A flexible scheme of horizons and intermediate periods appears to be the best antidote to that endemic archaeological affliction that George Kubler has diagnosed as "hardening of the periods" (1970: 128).

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The Epiclassic as a Stage in Mesoamerican Prehistory: An Evaluation

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FORTY YEARS AGO archaeologists could confidently divide Mesoamerica's cultural history into three major periods which were also considered stages: the Pre-Classic (500 B.C.–A.D. 300), Classic (300–900/1000), and Post-Classic (1000–1519). The Pre-Classic stage was generally perceived as one of simple cultures with hints of more complex features, such as monumental architecture, appearing near the end of the era.

The Classic was characterized as an era of climactic developments in art and architecture and relatively small, peaceful, theocratic, nonurban states. The meaning of the term theocratic was vague but was patterned after current notions about Sumerian social and political organization in the fourth millennium B.C. In this now outdated reconstruction Sumeria was ruled by corporations of priests who organized production, labor, and the distribution of surpluses, much of which was diverted into temple construction and maintenance.

The Post-Classic period was described as a time when empires were formed through conquest, cities evolved, warfare became endemic, and art and architecture declined in quality. Most scholars felt that these stages were applicable to the entire Mesoamerican culture area, at least in terms of their content. Furthermore, the consensus held that the shift from the Classic to Post-Classic could be explained as the result of barbarian invasions from the northern frontier, combined with agricultural collapse in the case of the Lowland Maya.

Major discoveries in the 1940s and 50s began to erode this elegant edifice of cultural reconstruction. The breakdown began when the Carnegie Institution of Washington (CIW) excavations at Kaminaljuyu (Kidder, Jennings, and Shook 1946) demonstrated that the various Classic civilizations were not strictly contemporaneous and that Teotihuacan's birth and collapse predated those of Lowland Maya civilization by several centuries.

Important developments in dating gave rise to another series of changes. New data demonstrated that the inception of the Pre-Classic, defined as the appearance of pottery-using sedentary villagers, had occurred by 1500 B.C. and perhaps even one thousand years earlier. In addition, certain features of complex culture and society were

evident as early as 1000 B.C. including monumental architecture, sculpture, and other crafts.

At the same time our conception of the Classic was undergoing drastic change. Highly evolved urbanism was evident during the Early Classic in some areas, and endemic warfare clearly exerted an impact on Mesoamerican sociopolitical institutions and structures by the Late Classic. The data from Tikal (Stela 31) suggests that the process was occurring as early as the Middle Classic.

The new information suggested substantial variations in cultural form and development at any given time, and that many of the differences once thought to reflect change through time were really a matter of spatial distribution. All this created a dilemma: how could we organize that vast body of new data into a coherent picture of general development that would encompass the entire culture area?

At a School of American Research Advanced Seminar on recent developments in research in the Basin of Mexico, we proposed to abandon the terms Pre-Classic, Classic, and Post-Classic and replace them with a chronology devoid of any implications about cultural content, one based on horizons similar to those used by Central Andean scholars (Wolf 1976). Particular regional styles of the type Andeanists call horizon styles characterized Mesoamerica during at least three time periods. These horizon styles were expressed in architecture, sculpture, ceramics, and other media, and in every case the style was sufficiently integrated to suggest a rapid spread with little chronological lag.

The Olmec horizon was the earliest of the three. Many of its elements apparently originated on the South Gulf Coast during the San Lorenzo phase (ca. 1250–950 B.C.). Next came the Teotihuacan horizon style which apparently climaxed during the Tlalmimilolpa and Xolalpan phase (A.D. 400–600). In my opinion the peak of this diffusion probably occurred in the Late Tlalmimilolpa phase. The final horizon style, called the Mixteca-Puebla, appeared in what was formerly called the Late Post-Classic period. It probably originated at Cholula but was adopted, modified, and spread under the aegis of the Aztec empire. It was preceded by the wide distribution of X Fine Orange and Plumbate ceramics at the time of the Toltec empire (A.D. 1000–1200). We re-

ferred to the time periods encompassed by the three horizon styles as the Early, Middle, and Late Horizons, and called the times between them intermediate periods. This is a vast improvement over the old system because it permits us to place regional developments securely in time while avoiding the problems inherent in the great cultural variability that often characterizes local sequences. Numerous scholars have adopted this system, including several authors in this book.

Dumbarton Oaks sponsored a summer seminar in 1984 focused on the definition and content of what is sometimes called the Epiclassic or Terminal Classic. The block of time involved is not defined very precisely but appears to bridge the disappearance of the Middle Horizon Teotihuacan style at A.D. 600–700 and the rise of the Tula/Toltec state after A.D. 1000 or 1100. The term Epiclassic is open to criticism because the time period includes the Classic climax of the Lowland Maya heartland.

The time period that forms the focus of this book is Phase One of the Second Intermediate period, since the Toltec period was designated Second Intermediate Phase Two rather than given horizon status. In view of the variety of problems I wish to address, the best place to start is with an evaluation of Teotihuacan as a community and the diffusion of its horizon style.

During the six centuries after the birth of Christ, Teotihuacan emerged as one of the two largest urban centers in Mesoamerican history (Millon 1973). Only Aztec Tenochtitlan rivaled or surpassed it in size and population. It is always difficult to estimate prehistoric populations, but Teotihuacan must have exceeded 100,000 inhabitants at its peak and certainly never exceeded 200,000. Its level of urban development, as expressed in population size and density, internal heterogeneity, degree of social stratification, economic specialization, and specialized economic institutions such as markets and professional merchants, greatly exceeded that of any other center of its time.

The last two features, in particular, distinguished Teotihuacan from its contemporaries. Surface collections from 2,000 plus apartment compounds suggest that at least a third of the population practiced some economic specialty. The products manufactured by these specialists ranged from elite items used only by the upper class to cooking pots, obsidian tools, and other utilitarian objects used by everybody. We suspect that the inhabitants of every compound practiced some specialized economic tasks in addition to growing at least some and perhaps most of their own food. Social groups living in the compounds probably had a complex set of internal statuses, division of labor, and economic specialties, and total group income was undoubtedly dependent upon a variety of extraction, production, manufacturing, and commercial activities.

Obsidian processing was a basic industry in the Teotihuacan economy. Vast quantities of obsidian tools were produced for local consumption within the city, export of basic utilitarian tools to the immediate hinterland, and export as luxury items to virtually all of Mesoamerica (Spence 1981). There is good evidence for state involvement in obsidian production for export, a large central market, and a professional merchant class.

Teotihuacan differed strikingly from Aztec Tenochtitlan in that a very large portion of the population resided within the city. The city contained approximately 50 percent of the people living in the Basin of Mexico, the Tula area, and northwestern Tlaxcala. Aztec Tenochtitlan, on the other hand, had a much more normal urban-rural population ratio; no more than 20 percent of the regional population in the same area resided in the capital city.

This brings us to the problem of Teotihuacan's relationship with areas outside its core state, a matter that Robert S. Santley has considered (this volume). The CIW research at Kaminaljuyu in the early 1940s provided the first evidence for the wide distribution of portable objects, particularly ceramic vessels, in indisputable Teotihuacan style. These vessels were usually associated with high status burials and included both Teotihuacan products and locally made imitations of them. Cylindrical tripod vases are the hallmark of the style, but it is also evident in composite incense burners depicting Teotihuacan deities and numerous other examples of Teotihuacan iconography and symbolism.

It is not unusual to find Teotihuacan style elements side by side with native elements. In addition to Teotihuacan and Teotihuacan-inspired goods, green obsidian from Pachuca and Thin Orange pottery were traded into Kaminaljuyu. Thin Orange is a distinctive ware which apparently was not manufactured at Teotihuacan but was distributed by its merchants.

Why did this diffusion occur? How did Teotihuacan exercise influence over such a huge area? Although trade is clearly part of the answer, the ritual context in which many of the objects were found suggests other processes and mechanisms as well. Furthermore, why was Teotihuacan the source rather than some other center?

Evidence from Kaminaljuyu, Tikal, and Matcacapan indicates a much more complex situation than can be accounted for by trade alone. The high status burials found associated within the superimposed temple platforms at Kaminaljuyu contained Teotihuacan or Teotihuacan-inspired pottery side by side with local vessels. However, the really distinctive thing is the Teotihuacan style architecture of the latest buildings, including standard *talud* and *tablero* facades. Later excavations by the Guatemalan archaeologists revealed a massive acropolis built in pure Teotihuacan style at the very center of the site. Finally, several Kaminaljuyu sculptures depict Teotihuacan iconography. These three lines of evidence suggest a pervasive Teotihuacan presence at Kaminaljuyu, one that reflects much more than simple commerce.

The nature of Teotihuacan's presence in southern Mesoamerica is further clarified by historical inscriptions carved on Tikal stelae. Stela 31 shows a centrally placed Maya lord flanked by warriors with Teotihuacan style dress and weapons, suggesting direct contact between Teotihuacan and the Maya elite. It also provides an indication of Teotihuacan's military involvement in Tikal affairs. Furthermore, later inscriptions at Tikal indicate that the rulers of its last dynasty claimed descent from these early Teotihuacanos (Coggin n.d.).

The situation described by Santley at Matcacapan is somewhat similar to the Kaminaljuyu and Tikal cases but differs

in some fundamental ways. One similarity is the presence of Teotihuacan style architecture at Kaminaljuyu and Matacapán. However, the contexts of the buildings are quite different at the two sites. During Santley's first field season at Matacapán it appeared that Teotihuacan influence, as expressed in the presence of portable objects, was restricted to a relatively small area near the Teotihuacan style structure excavated in the 1940s. Thus the situation seemed very similar to that in the area around Mounds A and B at Kaminaljuyu.

However, later field seasons at Matacapán revealed that Teotihuacan style artifacts are found over virtually the entire 4 km² zone which comprises the urban core of the site. The Teotihuacan style ceramics appear to be local imitations rather than imports from Teotihuacan itself. Furthermore, the site has also yielded burials with Teotihuacan style goods among the offerings, but these have not yet been described. In addition, Stanley reports domestic structures that seem to reflect Teotihuacan canons of residence. Perhaps the most interesting discovery at Matacapán is the wide distribution of Teotihuacan style *candeleros* and figurines in addition to the cylindrical vases. Typical Teotihuacan household ritual objects of this sort have never been found at Kaminaljuyu.

How can we explain the differences in the nature of Teotihuacan contacts at the three sites? Several years ago I attempted to explain Teotihuacan-Kaminaljuyu contacts using ethnographic analogy, and I arrived at the following conclusions (Sanders 1977):

1. Contacts were direct, face-to-face encounters between Teotihuacanos and the residents of Kaminaljuyu.
2. Commercial relations were the primary motivation behind Teotihuacan's interest in Kaminaljuyu. The Teotihuacanos chose Kaminaljuyu for its location between several contrasting environmental zones and for its centrality in an existing commercial network dedicated to the production and distribution of local obsidian artifacts.
3. Male Teotihuacan merchants resided permanently at Kaminaljuyu and acted as factors for this trade. During the initial phase of the process they presumably resided in or near the area adjacent to Mounds A and B.
4. The Teotihuacan merchants eventually married into local chiefly families. This conclusion is based on the absence of Teotihuacan style residences and typical Teotihuacan household ritual paraphernalia such as *candeleros*, composite censers, and figurines. All the ritual objects with Teotihuacan iconography at Kaminaljuyu are found associated with high status male burials or temples. This implies that while Teotihuacanos organized extrahousehold ritual to their own deities, the rituals practiced in their houses were essentially indigenous.

Some of these features are very similar to characteristics of the Aztec *pochteca* merchants in the sixteenth century, and I used them as a model in my interpretation.

I am convinced that this pattern characterized Kaminaljuyu during the occupation of Mounds A and B, and in separate papers Kenneth Brown and I (Brown 1977; Sanders 1977) suggested that the Teotihuacanos formed an ethnic enclave living within the town. However, the situation changed after the decline of Teotihuacan. The data suggest that the merchants became directly integrated into the local

Maya elite and that ultimately this new Teotihuacan-Maya elite came to dominate local political affairs. I still believe that this model is the best explanation of the course of events, and I believe that a similar process took place at Tikal. However, the widespread distribution of Teotihuacan style household ritual objects among such a large population at Matacapán suggests a much more imperial relationship vis-à-vis Teotihuacan.

In complex societies ethnic enclaves play a special role in terms of the larger system. Carleton Coon (1951) uses the term "mosaic pattern" to describe Middle Eastern cities, that is, the city is composed of a great number of ethnic enclaves, each playing a specialized economic role in the life of the community. He contrasts this pattern with the industrial city where ethnic groups tend to be assimilated (but, even there, not universally). Ethnic groups in preindustrial cities, like those in the Middle East, in contrast, emphasize their ethnicity. This identification is primarily expressed in language, dress, and particularly religion. In fact, the dedication to religion, in terms of the amount of time and energy devoted to it, may be intensified when a group moves from their homeland to reside in a foreign city (see Cohen [1969] on the behavior of the Muslim Hausa in Yoruba towns in Nigeria). Since much of the technology used in daily life in complex societies is produced by professional craftsmen and purchased in markets, there may be few differences in the general run of artifacts used by ethnic enclaves when compared to the general population. The archaeologist is most likely to see differences expressed in ritual paraphernalia.

What is unusual about Matacapán is the very wide distribution of household ritual objects, apparently made locally, but in obvious Teotihuacan style. This indicates first that, unlike Kaminaljuyu, Teotihuacan families, not male traders, were residents there and that the majority of the population of the towns were foreigners. Their role was also clearly different from the small enclave of male Teotihuacan merchants-warriors at Tikal.

A good model here is the Aztec garrison-administrative town of Oztuman in Guerrero. The following passage from Durán (1964: 200) describes how such enclaves were established.

"O Lords," said Ahuizotl, "you know that in the war we waged on Oztoman and Alahuiztlan with the aid of Teloloapan, two of those cities were depopulated. All their fruit, cacao and cotton plantations were left deserted; it would be sad to see those lands lost and made barren forever. Therefore, I have decided to send people to settle that country to benefit by its riches and make it prosper. I thought about this and, considering how great and popular those cities were, I wish to send four hundred men together with their families from Mexico, I also desire that each of you send four hundred families so that the total would be one thousand two hundred. From the other provinces there will go twenty settlers which will make a total of eight hundred; the grand total will be two thousand families, one thousand for each city."

I visited the site of Oztuman in 1951, and the archaeological remains (consisting of a fortified hill and ridge, with temples, moats, and breastworks) and the presence of Nahuatl speakers at the nearby village of Acapetlahuaya confirm Duran's account.

I therefore accept Santley's conclusion that Matacapan was probably a large urban community established by Teotihuacan during a process of imperial expansion. If his assessment is correct, Matacapan had 15,000–20,000 inhabitants, all of whom probably were migrants from Teotihuacan. Thus Matacapan was strikingly different from Kaminaljuyu with its 5,000 or 6,000 inhabitants, most of whom were certainly indigenous.

How, then, can we characterize the Middle Horizon and Teotihuacan's role in Mesoamerican affairs at this time? The Conquest period Aztecs provide an excellent ethnographic analogue. Like the Teotihuacanos, they occupied a relatively arid, highland plateau region with only limited natural resources, but they had direct access to a major obsidian source in the nearby Pachuca area. They actively sought to acquire exotic goods not available in their homeland. They traded for them when forced to and maintained a class of professional merchants to manage the trade. However, when possible they incorporated the producers of the exotic goods into their political realm and extracted the products from the local rulers in the form of taxes. Trade was conducted by merchants who resided in the foreign communities, and taxes from within the realm were collected by resident administrators and warriors.

The primary difference between Teotihuacan and Tenochtitlan was the latter's enhanced ability to achieve political and military solutions, an ability grounded in its clear demographic advantage over its neighbors. Mesoamerican warfare was essentially a matter of engaging large masses of men in close combat, and battles were fought with little tactical sophistication. In such conflicts the side with the most men on the battlefield was generally destined to win. Teotihuacan's core state during the Middle Horizon contained no more than 250,000 people, while the Aztec core state encompassed the same basic area but had a population base of 1–1.25 million people. Thus it should come as no surprise that Teotihuacan emphasized commercial relations rather than conquest as its *modus operandi*.

I fundamentally agree with many of the contributors to the present volume, and other scholars as well, that Teotihuacan's major achievement was the integration of many formerly independent First Intermediate period trade networks into a single pan-Mesoamerican system. Teotihuacan's success in this endeavor resulted from advantages inherent in its institutional structure compared with those of its contemporaries. These advantages included: (1) a large and well integrated urban population, (2) a highly developed craft industry based on the relatively large production units evident in the apartment compounds, and (3) a professional merchant class. These three features gave Teotihuacan a distinct advantage over its competitors in the production and transport of goods. The collapse of this system in the eighth century gave rise to the conditions that are the subject of this book.

Richard Diehl (this volume) documents the final phase of Teotihuacan's decline. Based on the findings of Millon and his colleagues, Diehl notes that the population decline began during the Metepec phase (A.D. 650–750). The population dropped from a peak of ca. 125,000 in the preceding Xolalpan phase to 85,000. Teotihuacan was still a major urban center during the Metepec phase, but the city's economic and political power was already on the wane. In the succeeding Coyotlatelco phases the population dropped to fewer than 40,000.

Mastache and Cobean (this volume) present some interesting new data and insights into the process of Teotihuacan's decline from the area around Tula. Their region had a substantial Middle Horizon population, and its settlements included large towns and villages. Building styles, ceramics, and other artifacts were virtually identical to those of Teotihuacan. The evidence suggests that Teotihuacan initially colonized the area and that politically it was incorporated into its core state. They note the absence of Late Xolalpan and Metepec ceramics and suggest that the population was either replaced or absorbed by northern intruders who introduced Coyotlatelco pottery into the region. Two subphases are defined for the Coyotlatelco period. The earlier one is dated as contemporaneous with Metepec at Teotihuacan and features large sites located on defensible hilltops. A political atmosphere of hostility toward Teotihuacan is clearly evident at this time, and the inhabitants did not even participate in the remnants of Teotihuacan's trade network. For example, the sites have very little obsidian and none from the Pachuca source area. In the late subphase these sites were abandoned and replaced by new centers on the plain or atop low ridges, including a large town on the site of future Tula. Presumably the Coyotlatelco style spread throughout the Basin of Mexico, including Teotihuacan, at this time.

Evelyn Rattray's recent excavations at Teotihuacan indicate that it was still an urban community during the Coyotlatelco period and that obsidian production continued to be a major industry (Rattray 1981). In fact, as Diehl points out, it had a larger population than any other community in the region. However, it no longer operated in a political vacuum. Its new competitors included the emerging Tula, later to evolve into the capital of the Toltec empire, Xochicalco, and Cacaxtla. None of these towns were as large as Teotihuacan, and I estimate that all contained less than 15,000 people.

As Diehl indicates, Cholula has always been the most vexing problem of this time period in the central plateau, and the absence of a discussion of it in the present volume is regrettable. If Muller's (1973) analysis of Cholula's history is correct, it was virtually abandoned at this time. If that is true, Cacaxtla is the best candidate as its replacement in the political leadership of Puebla-Tlaxcala.

Muller argued that Cholula was continually occupied from late First Intermediate times until the Middle Horizon. After emerging as a major Middle Horizon center, it was abruptly abandoned during Phase One of the Second Intermediate or Coyotlatelco period but soon regained its position as a dominant community in the Post-Classic, the time

to which she would assign the Great Pyramid. Her conclusions are based on a limited number of small test pits scattered across the site and the information from extensive excavations in and around the Great Pyramid. This reconstruction is problematic.

First, the final phase architecture buried under the Great Pyramid, which has Teotihuacan stylistic features, is not pure Teotihuacan and looks like a derived version of it. Stratigraphically it is associated with sculpture in mature Tajin Totonac style that is considered by Mexican archaeologists to postdate A.D. 800. Furthermore, none of the reports of the recent excavations by the Instituto Nacional de Antropología e Historia suggest that these buildings were in ruins when the great mass of fill of the Great Pyramid was heaped over them (Marquina 1964, 1970).

These facts suggest that there was no significant break in Cholula's functioning as a major center. On theoretical grounds alone the situation where a city of tens of thousands of people is virtually abandoned for two to three centuries, then reoccupied by an equally large, or larger population, with virtually the same boundaries and locations of major public buildings, stretches the imagination.

The origin of the Coyotlatelco style, discussed by Diehl and in more detail by Mastache and Cobean, is a major controversy with substantial implications. Mastache and Cobean argue that it was introduced to the central plateau by migrants from the north. In my view this explanation is far too simplistic. When dealing with diffusion, one has to explain why it succeeded, not simply where things came from. I believe that the political situation in Central Mexico is much too complex to be explained as the result of a foreign invasion focused on the Tula area.

The Coyotlatelco style was apparently spread over at least 12,950 km², including the Basin of Mexico, southern Hidalgo, and at least part of the Valley of Toluca. Furthermore, it is thought to be the major ceramic complex at Cacaxtla (E. Rattray, personal communication), and there are scattered references to its presence at Cholula. Given this distribution, one must answer the question, Why did the population of this huge region adopt a ceramic style introduced by a relatively small group of invaders who occupied only the northern peripheries of the area? As we pointed out in a recent publication (Sanders 1986), the transitional developments between Metepec and Coyotlatelco phase ceramics are evident in the pottery that we recovered from Oxtotipac Cave at Teotihuacan, and many late Teotihuacan ceramic traits survived into the Coyotlatelco period. In our opinion Teotihuacan's large size makes it the best candidate for the source of the style.

One of the arguments Mastache and Cobean present as evidence for the foreign origins of Coyotlatelco is based on the different locations of Teotihuacan and Coyotlatelco sites in the Tula region. However, that argument can be countered by noting the very striking continuity in site locations during the Xolalpan-Metepec and Coyotlatelco phases in the Cuauhtitlan and Tacuba areas in the Basin of Mexico. Furthermore, while it is true that only rarely does one find site location continuity at this time elsewhere in the basin, this must be at least partly due to the fact that much of the

total basin population was residing in Teotihuacan in Xolalpan-Metepec times. In fact most of the settlements in the eastern and southern parts of the basin were small hamlets that may not even have been permanent communities. I believe that the changes in population histories of these areas can be explained by the fact that Teotihuacan sites evolved into substantial Coyotlatelco phase settlements when farmers deserted Teotihuacan as a response to its declining political and economic fortunes.

Iconography and epigraphy are the primary foci in every paper dealing with Cacaxtla and Xochicalco except for Kenneth Hirth's. Cacaxtla is a particularly interesting example of cultural syncretism, as many researchers have noted. One's first impression is that the murals are Maya, particularly in their manner of representing the human figure. In this regard they strongly resemble Bonampak's famous murals. However, despite the presence of certain Maya iconographic elements, several researchers emphasize the essential Central Mexican character of most of the symbols. Debra Nagao, for example, concludes that Cacaxtla was ruled by highlanders who contracted Maya craftsmen to paint the murals. This seems to me to be the most likely explanation and has striking parallels with David Grove's reconstruction of events with regard to Chalcatzingo's Early Horizon carvings.

The situation at Xochicalco appears to be quite different, and there is very little evidence of direct Maya influence. The Pyramid of the Plumed Serpent carvings have vague resemblances to Maya sculpture, but the similarities are much more generic than specific and cannot be linked to any given Maya site. Furthermore, I believe that the supposed presence of Maya Lowland portable objects at Xochicalco has been greatly exaggerated. In reality very few have been reported in the literature. Apparently Fine Orange pottery does occur in some quantity, but it is hardly a typical Maya product. It apparently originated on the eastern part of the Tabascan coast, an area on the Lowland Classic Maya periphery and one completely lacking typical Classic Maya centers.

I am fascinated by Janet Berlo's and Hirth's independent attempts to interpret the symbols on the facade of the Pyramid of the Plumed Serpent at Xochicalco, and their conclusions are convincing. Their attempts follow a general trend in recent developments in the study of Mesoamerican writing systems, one that emphasizes the basically political and secular, as opposed to religious, nature of the subject matter. This new knowledge of the Xochicalco state and its tributary towns is an exciting contribution to our understanding of Mesoamerica after the Middle Horizon.

However, I must register a complaint and insert a note of caution about too-literal interpretations of ancient place names, one that applies equally to Joyce Marcus' recent readings of Monte Alban inscriptions and similar attempts by other scholars. The fact that an early glyph is identical to the name or glyph of a historic community does not necessarily mean that they refer to the same community. Settlement pattern studies often show frequent and dramatic shifts in community locations through time. In such cases a Coatepec listed in the Matrícula de Tributos cannot

be the same community referred to in a Xochicalco inscription. Several factors account for this. Identical place names are often used for different towns at the same time, and even today Central Mexico contains at least six towns named Coatepec. The Coatepec of today may not be the Coatepec of A.D. 800. At the very least it seems that ancient place names can be assigned to a historic town only when archaeological evidence indicates a long and continuous record of occupation from the time in question until the sixteenth century, and even then assumptions about continuity of place names must be accepted with caution.

Marcus Winter's paper on Oaxaca is very disturbing and has serious ramifications for our understanding of culture history in the Valley of Oaxaca. Archaeologists have conducted a great deal of research in the area during the past fifteen years. These investigations have included many excavations, an intensive survey of Monte Alban, regional surveys of the entire valley, and studies of the iconography and epigraphy. The cultural-historical and processual constructs that have been proposed on the basis of these data include a model of urbanization and growth; reconstructions of regional settlement, population, and land-use patterns; and political and economic institutional models. These constructs have been generated on a scale almost unprecedented in Mesoamerican archaeology, but here we have yet another study (e.g., see Santley 1983) that suggests that a major portion of the ceramic chronology which provides the crucial basis for these models is incorrect or poorly understood.

Monte Alban IIIa has always been difficult to separate from IIIb because Caso, Bernal, and Acosta's original definition was based upon grave lots and the presence of numerically rare Teotihuacan ceramic traits. Now it appears that IIIb cannot be distinguished from IV, and that we have a large chronological gap between IV and VI. Yet, as Winter points out, this is precisely when Monte Alban rose, attained its peak, declined, and was abandoned. How can we accept settlement and population histories from an area when the basic chronology is so confused?

The Maya Lowlands are discussed by Joseph Ball, an archaeologist, and Jeff Karl Kowalski and Andrea Stone, both art historians. It is unfortunate that there are no other papers on the Maya region, given its size and the complexity of its history.

Stone's paper on Piedras Negras is perhaps one of the best examples of how art historians and archaeologists can do mutually productive and stimulating research. I find her arguments as to the nature of Teotihuacan influence on Classic Maya art both convincing and exciting. The circumstance of Teotihuacan's impact on local cultures, as I pointed out, is highly variable and the Classic Maya situation is clearly different from Kaminaljuyu and Matcacapan.

Her discussion of connection and disconnection is of particular interest and I believe easily transferred to anthropological idiom. Societies where connection is stressed between rulers and ruled are classic examples of Fried's and Service's ranked societies; and disconnected societies, that is, where the difference between rulers and ruled is symbolically stressed, are just as obviously stratified ones. The frequent use of Teotihuacan iconography by Maya dynasts

probably relates to periods in the history of Maya ruling lineages when they had augmented their power over rival lineage heads and needed new symbols to express that power. This would explain the highly variable distribution of Teotihuacan influence in space and time over the Maya Lowlands since it would relate to the particular local evolution of each Maya polity.

Ball provides an overview and attempts to link the Post-Conquest historical narratives to the archaeological record. His effort is part of a long tradition in Maya studies, one growing out of the ambitious efforts of J. Eric S. Thompson (1970). I have always been very skeptical of such attempts and remain unconvinced by this latest effort. The basic problem centers on the sketchiness of the surviving historical accounts and the contradictions they contain. For example, the Books of Chilam Balam (Roys 1931) are so terse and the katun counts in them are so poorly anchored in time that they can be interpreted any way one wishes. These problems are compounded by the strong likelihood that the "histories" were deliberately manipulated for political ends. I am convinced that much of Mesoamerican political "history" consists of outright propaganda. The historical record in Central Mexico is considerably richer than that for the Maya, yet even there endless arguments surround the meaning and integrity of the sources.

Maya references to a group called the Itza clearly had some historical meaning to the Conquest period elites, and I believe that a strong case can be made for their "southern" origins. They probably came from Tabasco and southwestern Campeche, as some writers have suggested, and undoubtedly had some relationship with the Central Mexican Toltecs. After all the arguments about ties between the Toltecs and Chichen Itza have been exhausted, it is still clear that a very special historical relationship existed between Chichen Itza and Tula. This relationship was much stronger and more specific than the one between Xochicalco sculpture and Maya art, for example. There can be no doubt that people from the two areas maintained direct contact, and there is clear evidence for the spread of a highly structured religious-political ideology.

Ball's invention of new terms, such as Ytza in opposition to Itza, and his reconstruction of specific and separate migration routes seems to me to be an unproductive endeavor. What does emerge from Ball's paper is yet another indication that the Lowland Classic Maya collapse was a very complex process characterized by considerable variation from one area to another. This has become increasingly evident over the years.

Recent research indicates that the Puuc sites reached their climax well after the Peten centers had already experienced a considerable decline. Of course this makes it increasingly difficult to apply an overall stage approach to Maya prehistory and renders terms such as Late Classic, Terminal Classic, and Epiclassic almost meaningless. For example, our recent investigations at Copan indicate that while centralized political control ceased at around A.D. 800, population size continued at its late eighth-century peak for at least a century, and noble lineages were able to maintain their status and control. It was not until after 900 that

population size and political control declined, and the valley was not abandoned until 1200. At Seibal, on the other hand, centralized control climaxed during the tenth century; in the Puuc it lasted until the eleventh; and in the Peten both population and centralized rule diminished very rapidly after A.D. 800 (cf. Andrews 1973).

Kowalski and Ball both present an interesting economic model of events after A.D. 700. They accept the model of a unified, Teotihuacan-centered Middle Horizon commercial network very similar to the one I discussed earlier in which Teotihuacanos lived at the nodes in the network. They further believe that much of the Teotihuacan influence occurred in the context of centralized trade in elite and prestige goods. When this centralized system collapsed, it was replaced by a series of separate regional networks. The Putun system first described by Thompson (1970) for the Conquest period was one of these systems.

The Putun were a trading group in southwestern Campeche who organized much of the commerce in the Southern Maya Lowlands in the sixteenth century. Historical evidence suggests a relationship between the Putun and the earlier Itza. Kowalski applies the model outlined above to the Epiclassic period and argues that the managers of much of this trade were direct descendants of earlier Teotihuacano merchants. He reconstructs a complex set of very specific intersite relationships based on evidence from epigraphy, iconography, and stylistic analysis.

Although in general I am very critical of attempts to correlate place names and personal names at different sites, here we have numerous and convincing specific correspondences in sculpture and portable art at Chichen Itza, Seibal, and several sites in the Maya Highlands. These very specific resemblances make Kowalski's case a very convincing one. It seems as though the Putun or Itza attempted to conduct business in the traditional Teotihuacan style but over a much smaller area. In all likelihood many such localized trade networks arose after the decline of the Teotihuacan system.

As a frequent visitor and participant in the annual Dumbarton Oaks Symposium, in recent years I have been impressed with the widening range of their scope and increasing relevance to more anthropological concerns. When, as in the case of this study, seminars focus on major historical issues, the relevance of iconographic and epigraphic studies in conjunction with those of a more traditional archaeological nature becomes evident. The exchange has given art historians a clearer perspective on how to make their field more relevant to anthropological interests.

The Classic Maya case is the prime, perhaps unique, example in Mesoamerica of how various threads of information, including epigraphy, iconography, household archaeology, regional settlement surveys, and burial analysis, can be woven together to produce a detailed reconstruction of ancient institutions. I say unique because of the unusual richness of the corpus of representative and narrative art compared to other Mesoamerican civilizations. Nevertheless, such data is available for all regions of the culture area, during and after the Middle Horizon, and for some areas before it.

However, one note of caution is advisable with respect to epigraphy. Much of it clearly refers to "historical" matters, but it should be emphasized that it was written by political leaders for political purposes and clearly was used as propaganda to enhance the prestige and power of the ruling class. I quote here a passage from Sahagún (1950–82: bk. 10: 191). The circumstance is the end of Tenochtitlan's servitude to Azcapotzalco and the beginning of Tenochtitlan's meteoric rise as the capital of a great empire, a role that the leaders of the nascent Aztec state felt was their supernatural, preordained destiny.

Then they devised the book of days, the book of years, the count of the years, the book of dreams. They arranged the reckoning just as it has been kept. And thus was time recorded during all the time the Tolteca, the Tepaneca, the Mexica, and all the Chichimeca reign endured. No longer can it be remembered, no longer can it be investigated how long they were left in Tamoanchan, which is to say "we seek our home."

The history of it was saved, but it was burned when Itzcoatl ruled in Mexico. A council of rulers of Mexico took place. They said: "It is not necessary for all the common people to know of the writings; government will be defamed, and this will only spread sorcery in the land; for it containeth many falsehoods."

In summary, the joint effort of archaeologists and art historians in the present volume is an exceptional attempt to provide new insights and ideas. New ground has been broken by the multidisciplinary attempt to understand Teotihuacan's influence during its years of prosperity, and the nature of its legacy.

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The Epiclassic Problem: A Review and Alternative Model

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INTRODUCTION

FOR MOST OF THE LAST TWO THOUSAND YEARS, cultural leadership in western Mesoamerica has emanated from the Basin of Mexico. In Classic and Post-Classic times, three cultures that arose in the Basin grew to exert a pervasive influence over widespread regions of Mesoamerica. The Classic culture of Teotihuacan was the longest lived and perhaps the most influential. The largest and most complex city in Mesoamerica for over half a millennium, Teotihuacan declined abruptly at the end of its Metepec phase, around A.D. 750 (Diehl, this volume). The city of Tula, in the northern reaches of the Basin, created its dominant Mazapan phase culture approximately A.D. 950–1150. Finally, Aztec culture rose to prominence in the Basin after A.D. 1350, its hegemonic empire appropriated by the Spanish conquerors in 1521.

Despite obvious differences in style and content, a single artistic tradition dominates monumental art in the Basin of Mexico, and adjoining portions of the Central Mexican Highlands, from the rise of Teotihuacan through the fall of Tenochtitlan. The consistency of this tradition is most evident when compared with the other major artistic traditions of Mesoamerica, those of the Coastal Lowlands and Classic Maya (Cohodas 1978: 19–25). While Coastal Lowland artists developed a narrative style (Parsons 1969: 141) involving multigure compositions, active postures, delineation of setting, and often a mythological blending of supernatural and human images, monumental art of the Classic Maya and Basin of Mexico tends to be more static and conservative, dominated by hieratic style and symbolic compositions that place more emphasis on costume and attributes. Among these symbolic styles, the humanistic Classic Maya emphasis on individualized portraits of the ruling elite—along with their sacrificial victims and prisoners—in which deity images are secondary, contrasts with the tradition of Central Highland Mexico which focuses on anthropomorphic deities rendered as accumulations of costume and attributes, attended by secondary humans who are usually not individualized. The Central Mexican approach is so thoroughly symbolic and nonillusionistic that the pictographic and ideographic image-signs (Berlo, Chap. 2, this volume),

which appear frequently after A.D. 600, are not distinguishable in approach from the figures, their attributes, or even suggestions of setting (Pasztor n.d.a). This contrasts with the distinctive approach and discrete placement of hieroglyphic texts accompanying Maya figures. Unlike the fluid and interwoven compositions of Classic Maya monuments, the sculptures and paintings of the Basin of Mexico are organized on the same geometric or gridwork plans that underlie architecture and urban design, resulting in unrealistically squat and squarish proportions for anthropomorphic images. The longevity of this Basin art tradition is remarkable in view of its ability to survive the two periods of decline in monumental art that separate the florescences of its three great cities—Teotihuacan, Tula, and Tenochtitlan—in contrast to the eclipse of the Coastal Lowland and Classic Maya traditions at the end of the Classic period.

Although these two periods of decline were apparently of similar length—about two centuries—similarities between the individual styles of the three great Basin cities are not of the same degree. Political and ideological concerns motivated early Aztec artists to proclaim historical connections with their Toltec predecessors by closely imitating the monuments of Tula (Umberger 1987), adding their own iconography to the old forms.¹ The Aztec may have been responsible for sacking all exposed sculptured facings from the temples and pyramids of Tula (R. Diehl, personal communication, 1987), which would have provided ample models for imitation. By contrast, a much larger gap separates the monuments of Tula from those of its predecessor, Teotihuacan. Although Toltec artists drew on many sources in developing their monumental art style, including several outside the Basin of Mexico, this diversity of inspiration does not fully justify the difference in approach followed by Toltec artists. Supporting evidence in ceramics, architecture, and settlement patterns (Mastache and Cobean, this volume) indicate that important disjunctions in population and restructuring of social organization occurred in the Coyotlatelco phase which are lacking in the later gap between Tula and Tenochtitlan. The importance of this re-

I would like to express appreciation to Esther Pasztor for reading a draft of this paper and suggesting profitable new goals and directions.

¹Aztec imitation of objects that they excavated at Teotihuacan and Xochicalco appears to have occurred later in their history, when their empire was already fully established and earlier, greater models than those of Tula were necessary for political propaganda.

structuring is underlined by the now general use of the term "Epiclassic" for the period between the fall of Teotihuacan and the rise of Tula.

FROM METEPEC TO MAZAPAN: ESSAYS ON THE EPICLASSIC

The present volume presents several different regional and theoretical perspectives on the reasons, mechanisms, and results of the Epiclassic restructuring in Mesoamerica. Santley attempts to clarify the nature of the Teotihuacan commercial system at its height in the Middle Classic period (A.D. 400–750) by tracing the interrelationship of Teotihuacan with its Gulf Coast enclave in the Tuxtla Mountains, at Matcacapan. The papers of Diehl and of Mastache and Cobean examine the Coyotlatelco phase restructuring that occurred in the Basin of Mexico between the collapse of Teotihuacan as an international power and the rise of Tula. The revival of large-scale international economic and political relationships in the Terminal Classic period is explored from the perspective of the Lowland Maya by Kowalski and by Ball and Taschek. The largest number of contributions examines this process of change in terms of the new trends that they consider define an Epiclassic approach. This issue is accorded much broader regional coverage than the other three problems, with contributions treating the Central Mexican Highlands (Hirth, Nagao, Baird, Berlo), Oaxacan Highlands (Marcus, Winter), and Maya Lowlands (Stone).

The Teotihuacan System

Santley begins his contribution with a summary and revision of his earlier (1983) paper on the relationship of obsidian manufacture and transport to the nature and function of Teotihuacan's trading system. He notes again that obsidian was a basic focus of manufacturing and transportation activities not only at Teotihuacan but also at sites with Teotihuacan enclaves such as Kaminaljuyu and Matcacapan, and that the time in which high status is accorded Teotihuacan throughout Mesoamerica, as revealed by the imitations of Teotihuacan art, coincides precisely with the climax of its obsidian trading system. The author also repeats the significant distinction between such enclaves or production nodes located near important and exotic resources, and the interactive nodes, which lacked important resources but developed as commercial centers by transporting and marketing products brought from elsewhere. He emphasizes that interactive nodes are independent capitals that profit from participation in the Teotihuacan transport and marketing system, and that production nodes could also take on such functions.

The remainder of Santley's essay constitutes a more intensive study of the Teotihuacan enclave at Matcacapan. The obsidian remains from this production node are subjected to a barrage of statistical analyses in order to clarify the manner in which such an enclave would participate in the Teotihuacan system. A sample of his results is the clear difference of Teotihuacan's obsidian industry, in which workshops were often specialized according to the source and quality of material, the type of manufacture, and the

intended client, in contrast to the more uniform industry at Matcacapan involving the manufacture of blades from prepared cores. The evidence that ceramics were developed as a specialized local product of Matcacapan industry is important for understanding long-distance trading relationships, since they could have been exchanged for the prepared cores brought from Teotihuacan. In briefly treating the problem of Epiclassic reorganization, Santley notes that Matcacapan may have declined before Teotihuacan influence was withdrawn, perhaps due to a volcanic eruption in the Tuxtla Mountains. However, the impact that the devastation of their enclave would have had on Teotihuacan and its trading system still awaits exploration.

The Coyotlatelco Decline

Since the Coyotlatelco Phase decline in monumental art separates the period of Teotihuacan florescence from that of Tula, it is most useful to have contributions that view this phase from the perspective of both cities. Diehl discusses various possible mechanisms of Teotihuacan's fall from dominance as well as the nature of its existence in the Coyotlatelco phase, noting the dearth of relevant archaeological information often due to destruction of Coyotlatelco phase remains in search of the more lavish ruins underlying them. Diehl also discusses various population estimates for Coyotlatelco phase Teotihuacan, suggesting that approximately one-quarter of the Metepec phase population still remained. He makes the important point that although a population of thirty thousand assumes political authority, and there is continued evidence for craft specialization, the erection of public monuments ceases and the Teotihuacan art style is thereby eclipsed. Can it be that long-distance trade in sumptuary goods—lacking in Coyotlatelco phase Teotihuacan—is a precondition for the development and continuation of a monumental art style?

Mastache and Cobean present evidence that recent emigres from lands outside the Basin of Mexico to the northwest may have mixed with earlier Basin populations to create a new hybrid culture. They discuss the remains at the most populous of these Coyotlatelco phase sites in the Tula region: La Mesa, Cerro Magoni, and Tula Chico, noting the new approach to architectural planning that dominates the civic-ceremonial constructions at the core of each settlement. A fragment of architectural relief sculpture found at La Mesa offers tantalizing evidence for at least a minor continuation of monumental art in the Coyotlatelco phase decline. Further evidence must await excavation of Tula Chico, the largest of these Coyotlatelco phase sites.

The Terminal Classic Revival

Two contributions to this volume treat the dramatic military and economic expansion of the Itza Maya which dominates Terminal Classic events in eastern Mesoamerica. Ball and Taschek's essay attempts to trace the history of the Itza, a Chontal Maya group originating in the coastal region of Campeche, and their eventual conflicts with eastern competitors whom they call the Ytza. The authors integrate archaeological, epigraphic, and ethnohistoric in-

formation into a comprehensive picture of this aggressive mercantile people, from their first presumed enrichment under the Middle Classic trading system to their ultimate domination of much of the Maya Lowlands from a capital at Chichen Itza. They postulate that these coastal Chontal would have been in an extremely advantageous position to provide entrepôt facilities for Teotihuacan traders, and that as Teotihuacan's control over the transport system declined, the Itza would naturally have begun to progress inland, seizing and controlling important commercial settlements as at Chakanputun and Chichen Itza.

Kowalski treats the Terminal Classic expansion of the Itza into the Southern Maya region. On the basis of both epigraphic and stylistic relationships, he associates the Terminal Classic revival at Seibal and similar sculptures at Quen Santo with the expansionist reign of Kakupacal at Chichen Itza. By colonizing Seibal in the Pasión lowlands, and Quen Santo in the Chiapas highlands, the Itza were able to revive Middle Classic trading links that connect the Maya Lowlands with the Guatemalan and Mexican Highlands, a trading system that would in turn allow the expansion of the Toltecs in the succeeding Mazapan phase. An accompanying revival in monumental sculpture is evident from Terminal Classic examples of Teotihuacan-derived elements used in warrior's costume cited by Stone (this volume).

The Epiclassic Restructuring

The seven papers addressing this problem may be discussed according to their particular region of focus. Stone identifies a particular focus of Teotihuacan imitation in the Middle Classic sculpture of Piedras Negras on the Middle Usumacinta. Stone notes that whereas the accession stelae of Piedras Negras place the ruler within the Maya cosmos, surrounded by prominent Maya deity images and themes of fertility, those stelae that depict the ruler as a warrior incorporate several Teotihuacan-derived motifs in the delineation of costume. It should be noted that elements of Teotihuacan imitation appear only on those stelae that show the ruler/warrior with face in frontal view and on the wall panels commonly called lintels. This type of costume does not appear on stelae with warrior images in profile view, on stelae that show the ruler in a gesture of scattering liquid, or indeed on any Piedras Negras sculptures erected after A.D. 736. Nevertheless, the accession and frontal warrior stelae provide a useful contrast of local and exotic accoutrements which Stone interprets as a method of demonstrating the ruler's connectedness to his people for purposes of fertility, versus his separateness for the purpose of aggrandizing his political and economic power by military means. Stone shows that the Highland Mexican association of Maya rulers in their role of warriors in Piedras Negras costume represents only one example of a widespread and formulaic connection that may also be noted in the Post-Conquest Maya chronicles of Yucatan.

Four of the contributions to this volume are primarily concerned with monumental art of the Central Mexican Highlands, especially Teotihuacan, Cacaxtla, and Xochicalco. Berlo (Chap. 2) discusses all three sites in an effort to

synthesize information on the Central Mexican tradition of image-signs. These appear to be of two types: (1) imitations of Maya or Zapotec texts, as in the Xochicalco stelae, where the image-signs are arranged in texts of vertical columns, and in some of the Teotenango sculptures; and (2) a more distinctively Central Mexican approach in which they are used to qualify or differentiate a series of anthropomorphic or plant images. Berlo concentrates on the latter approach, noting some examples at Teotihuacan (but not mentioning the Tepantitla *taluds*), while examining in greater depth the examples at Xochicalco and Cacaxtla. Of these, the Maguey Priest murals at Teotihuacan and the Cacaxtla murals illustrate the use of image signs in association with human figures. The nominative function of the Cacaxtla examples is evident from the use of different signs for different figures. Berlo shows that the carvers of the Tajin columns used the same nominative format, although she does not compare these as well with the strikingly similar dais of the Mercado at Chichen Itza. By contrast, the Techinantitla murals of Teotihuacan and the *tablero* carvings on the Pyramid of the Plumed Serpent at Xochicalco illustrate the toponymic function, in which a repeated element indicative of "place" (plant at Teotihuacan and mouth with quartered circle at Xochicalco) appears with a series of distinct image-signs that appear to define a specific locality. This approach was also imitated in the Maya area: the carver of the Palenque sarcophagus (A.D. 683) placed his ancestor figure torsos against a series of plants with the same leaf and branch structure but different fruits, as in the Techinantitla *talud*. However, despite the similarity in format, the Maya artist adapted it to a nominative function, using Maya style hieroglyphs to name each ancestor. Clearly the symbolic impact of the Central Mexican system of image-signs was recognized and respected by Lowland artists.

Baird also investigates the adaptation of Teotihuacan symbolic language at Cacaxtla, analyzing the form and content of a starlike motif at both sites. She notes that the motif underwent a disjunction in meaning at Teotihuacan, since it first appears with aquatic associations in fertility contexts and later with stellar associations in martial contexts. One may add that the development of warrior cult iconography resulted in several such disjunctions. For example, Berlo (1983) has shown that when the Teotihuacan butterfly motif was adapted into martial contexts, the fertility goddess with whom it had been associated also appeared briefly as a martial goddess. Perhaps the most famous example of this sort of disjunction is the feathered serpent, first seen as a water and fertility image on the Miccaotli phase pyramid at Teotihuacan, and later dominating warrior cult iconography as a symbol of Venus and his destructive power. Baird notes that while the Maya adapted the Venus and war contexts of the Teotihuacan star motif, the artists of Cacaxtla explored both meanings, drawing on both Teotihuacan and Maya approaches to its use.

Monumental art of the Epiclassic period has come to be defined according to two traits, eclecticism and militarism. Hirth focuses on the second of these traits in his contribution to this volume, noting that martial iconography tends

to appear in monumental art simultaneous with the manifestation of concern for a site's defenses, as in the fortified hilltop setting of both Cacaxtla and Xochicalco. In order to define the sociopolitical aspects of this new emphasis on militarism, Hirth notes evidence for a differentiation of warriors in the Cacaxtla murals into at least two ranks, suggesting ranked societies of warriors providing upward social mobility, as under the Aztec system. Hirth also analyzes Xochicalco sculpture for evidence of heart sacrifice and subsequent dismemberment of prisoners of war, suggesting that the Epiclassic populations also shared the Aztec cult of nourishing the gods through sacrifice. Finally, he interprets the toponymic image-signs on the Pyramid of the Plumed Serpent as representing tribute-paying polities conquered by Xochicalco, again suggesting similarity to the Aztec tribute system. One might add that the series of prisoners identified by nominative glyphs on the Mercado dais at Chichen Itza (Fig. 2) could also represent tribute-paying towns, as on the Aztec period Tizoc Stone. In this light there is no reason to eliminate from such possible conquest/tribute lists the plant *talud* of Techinan-titla which, as will be mentioned later, is the direct antecedent for the Chichen Itza dais. The Aztec used the metaphysical concepts of warfare and sacrifice as nourishment for the gods as a means to coerce their populace into fighting for the sake of tribute that would enrich only the elite. The evidence presented by Hirth and others clearly shows that these ideas arise from an unbroken evolution of martial cult and militarism that began in the Epiclassic.

In contrast to Hirth, Nagao focuses on the other characteristic of Epiclassic monumental art: eclecticism. Nagao shows that such eclecticism does not document a site's trading partners: monumental art does not simply reflect social or economic reality. Instead, it is a form of propaganda designed to convey messages about how the elite wish themselves to be viewed, and thus eclecticism represents a conscious choice. To support this distinction, Nagao notes that the sources for eclectic elements in the monuments of Xochicalco and Cacaxtla do not correspond well with their major trading partners as indicated by ceramic and obsidian remains. By analyzing the sources of their eclectic styles, Nagao is also able to differentiate the art of Cacaxtla and Xochicalco. She suggests that the artists of Cacaxtla drew more completely on Maya sources, even using Teotihuacan ideas in the form adapted by Maya artists, and that the result seems out of place in Central Highland Mexico. This importation of a foreign style contrasts with the art of Xochicalco, in which elements from more diverse sources are more fully adapted to the Central Highland tradition, allowing the Xochicalco style to inspire later cultures such as the Aztec.

Finally, we have two contrasting approaches to the Epiclassic reorganization that took place in the Valley of Oaxaca. Marcus investigates the processes of decentralization which have been used to explain the rise of Epiclassic cultures and styles in Central Highland Mexico, and the decline of Teotihuacan. Marcus cites the collapse of the Mayapan confederation when the central authority was no longer strong enough to hold the competing Maya city-

states in balance, suggesting that other centralized systems such as Teotihuacan may likewise have involved unstable confederations. Marcus also compares the history of Monte Alban with that of Teotihuacan. The location and settlement pattern of Monte Alban relative to other settlements in the Valley of Oaxaca suggested to Blanton (1978) that it rose to prominence as a center of confederation. Marcus suggests that the failure of the Monte Alban confederation in the Epiclassic allowed the peripheral valley sites such as Lambityeco to flourish independently through a process of decentralization analogous to that of Central Highland Mexico.

Winter disputes Marcus' model of decentralization by providing evidence to discount the interpretations of archaeological data on which it is based. Winter notes that, despite the use of the term Monte Alban IV to define the florescence of peripheral centers, and Monte Alban IIIB to define the late climax phase of the central capital, the two developments are contemporary. Furthermore, Winter notes interpretations by Paddock (1983: 187) indicating that Monte Alban's ability to erect monumental architecture outlasted that of peripheral sites such as Lambityeco. Winter finds no evidence at all for the process of decentralization outlined by Marcus. He also notes the almost complete lack of information on cultural development in the Valley of Oaxaca between the abandonment of Monte Alban in the eighth century and the rise of the great Mixtec-Zapotec kingdoms in the Late Post-Classic period, and that these centuries are likewise unknown in the Mixteca.

Discussion

A discrepancy emerges through the comparison of these papers which is relevant to the whole problem of the cause and nature of Epiclassic restructuring in Mesoamerica. The monumental art styles, characterized as Epiclassic by their eclecticism and martial iconography, find little parallel in the picture that Mastache and Cobean and Diehl draw of the Coyotlatelco phase decline in the Basin of Mexico. The methodology employed in these papers differs, with the reconstructions of the Coyotlatelco phase based on settlement pattern data, while interpretations of eclectic art styles are more comparative in approach, and the discussions of Epiclassic culture are designed to place these societies into an evolutionary model of sociopolitical change: decentralization and the growth of militaristic states. These papers may not even be discussing the same time period, since the Carbon 14 dates for Cacaxtla (Baird, this volume) and Xochicalco (Hirth 1980: 263) suggest that their eclectic art styles were formulated well before the collapse of Teotihuacan in the mid eighth century which began the Coyotlatelco phase.

Both the decentralization model and the confusion that has arisen from it may be traced to the original hypothesis of an Epiclassic phase. Jiménez Moreno (1966: 49) defined the Epiclassic as the period in which the Classic pattern of theocracy changed to a Post-Classic pattern of militaristic states. His view of Classic theocracy is highly idealized: he describes Teotihuacan as a city governed by high priests

who send out colonies of artists to propagate peacefully the cult of Tlaloc (Jiménez Moreno 1966: 50). His description (Jiménez Moreno 1966: 52–60) of new states with militaristic imagery is correspondingly negative. The new states are formed from barbarians who lack the ancient culture of Teotihuacan, and are therefore analogous to the roving bands of Chichimec who later destroyed the high culture of Tula and subsequently contributed to the formation of the Aztec state. This romanticized notion of cultural opposition permeates studies of Classic and Post-Classic culture in Mesoamerica. Baddeley (1983: 56–57) explains the underlying assumptions, noting that Maya culture has often been compared with that of Highland Mexico in terms of the moralistic polarity by which we classify cultures of Classical antiquity: we see the humanistic and refined cultures of Classical Greece in contrast to the barbarous militarism of later imperial Rome. Jiménez Moreno is simply placing Xolalpan phase Teotihuacan in the same category of peaceful theocracy under which he viewed Classic Maya culture, in order to create a polar opposition with the barbarous militarism of sites such as El Tajin.

A decade later Webb (1978) recast Jiménez Moreno's theory in more scientific terms. Webb elaborated this shift from theocracy to militaristic state in terms of the long-distance trade that characterizes the Middle Classic period in Mesoamerica. He suggests that the theocratic system of Teotihuacan involved peaceful exchange of ritual items, while the militaristic system of Epiclassic states involved more secular luxury goods marketed with the aid of commercial wars (Webb 1978: 161). Webb (1978: 159–161) also places this shift firmly on the evolutionary scale by inferring that it represents the development from chiefdom (Teotihuacan) to state (Epiclassic states). His scenario for this change has proven quite persuasive: the fall of Teotihuacan from absolute dominance of the Mesoamerican exchange system is believed to have given rise to an intense and often aggressively militaristic competition among its multiple successors. Those states that proved most successful were able to reorganize along militaristic lines (Webb 1978: 165–166). Although Webb (1978: 165) agrees that Teotihuacan must have undergone the restructuring to militaristic state, he suggests that the strain of transforming an ancient theocratic chiefdom must have led to its early demise. The exaggerated contrasts between Teotihuacan and the peripheral sites as theocratic chiefdom versus militaristic state suggest that Webb, like Jiménez Moreno, perceives this Epiclassic restructuring more as an arbitrary event than a logical process.

Archaeological evidence instead suggests that this restructuring of economic, social, and political systems was a more gradual process and that it actually occurred within the history of sites such as Teotihuacan. Berlo (Chap. 13, this volume) notes that Webb's characterization of Epiclassic trade as involving utilitarian items and associated with imagery of warfare is fully appropriate to Teotihuacan, with its manufacture and marketing of obsidian tools and the widespread imitation of its martial imagery. In fact, the elements of growing militarism that Hirth (this volume) has identified at Cacaxtla and Xochicalco occur as well in

Teotihuacan during Metepec and earlier phases. These include the martial images in the mural paintings of Atetelco or the Sun Palace, as well as in the funerary ceramics, along with the toponymic list at Techinantla (Berlo, Chap. 2, this volume). Furthermore, there is evidence of fortifications in Middle Classic Teotihuacan. The barrier wall enclosing the Pyramid of Quetzalcoatl has clear defensive potential, hence its current denomination as the Citadel. Later, the Calle de los Muertos complex was formed by constructing a wall around a series of temples and compounds on both sides of the Avenue of the Dead, in the region between the older Sun and Moon Pyramid complexes and more recent Citadel and Market complexes. Where the Avenue of the Dead passes through the Calle de los Muertos complex, it is divided by steep barrier walls into a series of defensible plazas (Pasztory n.d.a). The Calle de los Muertos complex was thus fully fortified by the end of the Metepec phase.

Pasztory (n.d.a) has also found evidence for a profound shift in cultural values at Teotihuacan contemporary with the elaboration of fortifications and martial iconography. By analyzing the style and structure of Teotihuacan's art, not the cult iconography, Paszatory is able to reexamine the supposed change from theocracy to militarism in terms of subtler transformations. She identifies a traditional Teotihuacan approach, which climaxed in the Xolalpan phase of greatest international prestige, and sees it as directed toward the unification of a heterogeneous population into a homogeneous community through symbols of corporate identity, thus precluding representations of historical individuals and elite status. Paszatory clarifies the dramatic shift in outlook reflected in the Metepec phase murals, which become more eclectic, virtuosic, and varied, thus stressing heterogeneity; and in the Metepec figurines, which now show members of the elite lavishly dressed and sometimes enthroned, thus stressing individuality and rank.

Paszatory's analysis of these changes in Teotihuacan art from expression of corporate identity to celebration of individuality and prestige may help clarify the shift in cult iconography noted elsewhere. Teotihuacan's traditional state cult accorded highest position to a fertility goddess associated with agriculture, caves, and springs (Paszatory 1978: 130). This cult would parallel the emphasis on corporate identity, for example, in the cooperative effort needed to construct and maintain irrigation canals. By contrast, the newer martial cult parallels a growing reliance on trade and military threat to enrich the city, which would place more emphasis on individual and particularly masculine achievement. In comparison, by Aztec times the ideal of individual achievement was military prowess. If the Epiclassic shift may be associated with a greater value placed on military achievement than on agriculture or even trade, then it may be the culmination of a process already at work for several centuries, since Teotihuacan's prestige is celebrated abroad by the image of a warrior as early as A.D. 445, on Tikal Stela 31.

Teotihuacan not only shared in the same Epiclassic restructuring evident at sites such as Cacaxtla and Xochicalco, but it also underwent this process simultaneously. The ra-

diocarbon dates associated with mural paintings at Cacaxtla (A.D. 649 $\pm$ 93, 744 $\pm$ 91, 755 $\pm$ 75: Baird, this volume) and those from the climax phase of Xochicalco (A.D. 655 $\pm$ 50, 730 $\pm$ 85: Hirth 1980: 263) cluster in the century between A.D. 650 and 750, precisely contemporary with the Metepec phase at Teotihuacan. Teotihuacan-derived motifs that appear in the costume of Maya rulers dressed as warriors (Stone, this volume) achieve their greatest popularity before the close of this period and in a form compatible with the eclectic murals of Cacaxtla. For example, the lintels of Structure 23 at Yaxchilan, noteworthy for the Mayanized Tlaloc mask (Lintel 25) comparable to those painted in the battle mural of Structure B at Cacaxtla, were erected in A.D. 726 or 731. Similarly, the paired stelae of Aguateca and Dos Pilas (Fig. 7), which are most comparable to the murals of Structure A at Cacaxtla not only in the Mexican-derived costume elements but also in the contrast of human figures in the guise of an eagle and a jaguar, were erected in A.D. 736. The rejection of these Teotihuacan-derived warrior accoutrements at Piedras Negras after A.D. 736 actually represents a widespread phenomenon occurring simultaneously at most Southern Lowland Maya sites.² The evidence suggests not only that the Cacaxtla murals were painted before the collapse of Metepec Teotihuacan around A.D. 750 but also that some aspects of Teotihuacan's international prestige were maintained until that time.

Although Epiclassic traits are clearly present in Metepec phase Teotihuacan, discussions of the Epiclassic period tend to focus on Xochicalco, El Tajin, and, more recently, Cacaxtla; despite the evidence of Carbon 14 dates, the relationship between these sites and Teotihuacan is generally treated as sequential rather than contemporaneous. The reason for this distortion is that Teotihuacan is generally considered to be in decline during its Metepec phase, an interpretation derived not from archaeological investigation of the site but from reflections of Teotihuacan's prestige abroad. The artistic shift at these sites away from direct imitations of Teotihuacan symbolic elements and ceramic shapes prominent in the period contemporary with Xolalpan Teotihuacan, and toward an eclectic combination of Maya, Zapotec, Veracruz, Cotzumalhuapan, and Central Highland traits prominent in the period contemporary with Metepec Teotihuacan, has generally been construed as evidence of Teotihuacan's decline.

That these other trading centers began their phase of most rapid growth at the same time that they rejected imitations of Teotihuacan art in favor of a more eclectic mixture does indeed suggest that Teotihuacan suffered some loss of prestige due to their expansion and competition. However, these interactive nodes, to use Santley's terminology, were never under Teotihuacan's political control, so their increase in population and wealth does not imply decentralization or decline. The growth of these interactive nodes might even be construed as contributing

to the continued growth of Teotihuacan's wealth if they participated in the trading network set up by Teotihuacan.

That Teotihuacan may for a time have derived profit from the competitive growth of other commercial centers is supported by evidence that this apparent loss of prestige was not accompanied by an immediate loss of Teotihuacan's wealth or power. Indeed, Teotihuacan retained its maximum population through the Metepec phase, making it still the largest city in Mesoamerica. During this period, Teotihuacan may have engaged in controlled colonization, applying its agricultural technology in other parts of the Basin of Mexico, indicating continued strength of its political authority over both the metropolitan region and other territories of the state. Finally, Pasztory (n.d.a) has shown that monumental art reached a climax of innovation and splendor in Metepec Teotihuacan, suggesting a continued display of wealth.

Prestige is a symbolic and intangible quality. Teotihuacan might well have suffered a decline in prestige even though it still retained paramount rank. In recent Canadian history, Montreal felt a decline in prestige due to the rapid growth of Toronto's population and economic activity, even when Toronto had not actually overtaken Montreal in either arena (A. Redish, personal communication).

Monumental art is directly concerned with prestige. As Flannery (1968) and Nagao (this volume) have shown, the elite use monumental art as propaganda to increase and solidify their own status within the local political structure. They may proclaim either real situations or situations that they desire to become real, depending on the greater advantage in public opinion, but these situations will be expressed in terms of the intangible qualities of status and prestige.

In the period contemporary with Xolalpan Teotihuacan, a local elite would derive greatest advantage by proclaiming its economic ties with Teotihuacan, at that time paramount in status due to its cultural, economic, and perhaps military superiority. For example, by having himself depicted on Tikal Stela 31 flanked hierarchically by men in Teotihuacan martial dress, the Maya ruler Stormy Sky was attempting to increase his own local prestige. Rituals also express prestige, but through symbolic action rather than static form. Ball (1983: 133) has shown that Tikal rulers must have used the Teotihuacan-imitation cylinder tripod vessels in rituals that "signify, affirm, or reenforce" these economic ties with Teotihuacan.

By contrast, the subsequent growth of Teotihuacan's interactive nodes as powerful and wealthy commercial centers in competition with Metepec Teotihuacan would have prompted a realignment of these status relationships. If, despite its continued material superiority, Teotihuacan's prestige was felt to be declining at the same time that the prestige of its competitor sites was considered to be rising, then these sites could be seen in terms of a more equal symbolic relationship with Teotihuacan. A local elite would then derive the greatest advantage in public opinion by using monumental art to assert equal status with Teotihuacan and the other competitor sites. The result would be the mixture of traits characteristic of each major commercial

²After A.D. 736, the major examples of Teotihuacan-derived insignia in the warrior costume occur at Yaxchilan, whose ruler Bird Jaguar IV was consciously imitating the earlier lintels of Structure 23 (A.D. 726–731) to bolster his shaky claim to the throne. The second exception to the general rejection of this imagery may be found on the stelae of Naranjo.

center, including Teotihuacan, which we call the eclectic style. We observe that the change in prestige structure was also accompanied by a change in ritual,³ as the ritual associated with cylinder tripod vessels was rejected in favor of other rituals, such as the ball game, which express more equal status relationships.

This reconstruction does not deny the likelihood that Teotihuacan's collapse around A.D. 750 was caused, at least in part, by increasing economic and military competition from other sites in the Central Highlands. However, this defeat would have taken place after Epiclassic traits were fully established both at Teotihuacan and at the competitor sites. Furthermore, there is reason to question to what degree, and for how long, these centers might profit from Teotihuacan's collapse. As each center achieves total control of the transport of goods within its territory, increased military competition between them might lead to a decreased flow of goods. Similarly, if they succeeded in dismembering Teotihuacan's commercial network, their own access to exotic sumptuary items might be cut off. Like Teotihuacan in the Coyotlatelco phase (Diehl, this volume), they would retain large populations and political authority but lack the inspiration to continue erecting architectural monuments with lavish decorations. In fact, there is no direct evidence that any of these competitor sites erected major monuments after Teotihuacan's collapse in A.D. 750.

Despite the lack of evidence for such dating, the major architectural monuments of Cacaxtla and Xochicalco have been assumed to postdate those of Teotihuacan, largely due to their similarity with the style of Chichen Itza that has been conventionally dated to the Toltec era. For this reason, Xochicalco was originally dated to the Post-Classic period. Now that sites with eclectic styles are considered to predate the Mazapan phase, their style is redefined as proto-Toltec, indicating that they link the monuments of Teotihuacan and Tula. Although Tula's monuments may be stylistically and iconographically related to those of Teotihuacan, the Pasion Maya,⁴ and Chichen Itza, there is actually little evidence of direct continuity with the eclectic style of Cacaxtla and Xochicalco. Furthermore, the link between Teotihuacan and Tula is now evident within the Basin of Mexico itself, in the Coyotlatelco phase sites of the Tula region. Specifically, the fragment from La Mesa (Mastache and Cobean, this volume) may be related not only to the monuments of Tula but also to the latest sculptures of Teotihuacan. The distinctive geometric character of its relief decoration is stylistically similar to that of the unfinished Coatlinchan colossus, apparently abandoned when Teotihuacan collapsed, and to the Palace of the But-



Fig. 1 Teotihuacan, Butterflies Palace, column on west side. (Bardsley photo).

terflies. This latter structure (Fig. 1) is characterized within the history of Teotihuacan art not only by a return to relief sculpture as the major medium of architectural decoration but also by the absence of the eclecticism and virtuosity that characterized Metepec phase mural painting. Taken together, these three monuments may suggest a style of monumental art that persisted through the Coyotlatelco phase in the Basin of Mexico and linked Teotihuacan with Tula. Rather than demonstrating relationships to the eclectic styles of Cacaxtla and Xochicalco, this Coyotlatelco phase style is based on a rejection of such eclecticism.

These reconstructions suggest a very different picture of Teotihuacan and its importance in the period A.D. 600–900. The shift to Epiclassic patterns of militarism may have occurred simultaneously at Teotihuacan and at other Central Highland sites, equally marked by the development of an eclectic style and martial iconography in art, and by defensive fortifications. Military competition from these other centers, while it would have contributed to the collapse of Teotihuacan around A.D. 750, would probably result in the decline of these centers as well. With its still greater population and territory, Teotihuacan may even have been able to erect a major monument of decorated architecture—the Palace of the Butterflies—after other Central Highland cities had ceased doing so. As the model of decentralization generally applied to the Epiclassic period

³The use of the second clause of the primary standard text on such cylinder tripods suggests that the rituals affirming economic ties between Tikal and Teotihuacan involved the drinking of cacao. In the Late Classic, the ceramic cylinders manufactured for cacao rituals lacked elements of form associated with the Mexican Highlands or any other foreign region.

⁴Imitations of Pasion Maya art at Tula are perhaps the least recognized. They include twin ball player panels, imitating the twin ball player stelae erected in the Pasion region between A.D. 780 and 810, as at La Amelia and Seibal (Greene et al. 1972: pls. 82–83, 104, 106); and two warrior-ruler stelae, which specifically imitate the Aguateca/Dos Pilas pair erected in A.D. 736 (Fig. 7). See Tozzer (1957: figs. 490, 552, 563a) for drawings of the Toltec monuments.

does not sufficiently accommodate either the data or these hypotheses, an alternate model is required.

One alternative model may be suggested by comparing the history of Central Highland Mexico with that of the Classic Maya. The erection of dated monuments representing local rulers is one of the most sensitive barometers of political authority in the Southern Maya Lowlands. This practice begins in the second to third centuries A.D. in the northern Peten sites, as at Tikal and Uaxactun. In the Middle Classic period, the erection of dynastic monuments spreads to the Usumacinta region (Yaxchilan, Bonampak), the Motagua region (Copan, Quirigua), and even to northern Yucatan (Oxkintok, Tulum). The maximum extent occurs in the late eighth century, just before many of these dynasties collapse and the area evincing monument erection decreases. Finally, with the exception of the Itza colonies in the Pasion and Chiapas regions (Kowalski, this volume), the only Southern Lowland sites still erecting monuments in the late ninth century are again in the Peten heartland, especially Tikal. Apparently, the oldest and most powerful center was able to withstand collapse longest and thus erect monuments later than the younger centers.

Although the mechanisms of economic and political interaction differ from that of the Lowland Maya, the process of areal expansion and contraction might be partially applicable to the Central Mexican Highlands. This would be the case if monuments such as the Palace of the Butterflies at Teotihuacan, which demonstrate a rejection of eclecticism, actually postdate the major examples of decorated architecture at peripheral sites such as Xochicalco and Cacaxtla.

Contemporary events in the Valley of Oaxaca, as interpreted by Winter (this volume), might suggest a further example of the expansion and contraction process. Monte Alban reached its maximum population in the phase preceding its collapse, just as at contemporary Teotihuacan. At the same time, according to Winter, other valley sites reached their peak, perhaps as interactive nodes in the Monte Alban economic system. Notably, the Carbon 14 dates for Lambityeco (Winter, this volume) are in precisely the same A.D. 650–750 range as those from Cacaxtla, Xochicalco, and Metepec Teotihuacan. Finally, Paddock (1983: 187) suggests that “some construction went on at Monte Alban after Lambityeco had come and gone,” indicating a pattern of contraction to the central city rather than decentralization. As may be seen from these comparisons, the model of expansion and contraction involves economic systems, so that it may describe processes affecting regions that are politically united, as in the Valley of Oaxaca, as well as those that remain politically segmented, as in the Southern Maya Lowlands and the Central Mexican Highlands.

Interpretation

All chronological schemes are based on arbitrary divisions which reflect individual choice in the weighing of similarities and differences between artifacts. Although they are designed to describe and organize information in a temporal sequence, these schemes and their respective ter-

minologies also tend to influence the interpretation of data. As such schemes accrue respect with age, there is more chance that new information will be forced into similar interpretations or be neglected. These points are amply demonstrated in the problem with which several of the contributions to this volume deal, the significance of eclectic styles and martial iconography at Xochicalco, Cacaxtla, and related sites. To define these artistic developments and the period in which they occur, most contributors adopt the term “Epiclassic” from Jiménez Moreno and Webb. Parsons (1969) places these developments in his “Middle Classic” phase, based on excavations at Bilbao. Sanders (Sanders et al. 1976) uses the similar term “Middle Horizon,” adapted from the Central Andean system, and based on settlement pattern surveys in the Basin of Mexico. In order to avoid letting these terminologies mislead our interpretations, it is important to identify the value judgments on which they are based and the advantages or drawbacks to these differing points of view.

Webb’s Epiclassic scheme places greatest emphasis on the appearance of militarism, revealed in the use of fortifications and in martial iconography, and seen as inconsistent with Classic culture in Mesoamerica. The eclectic style in which martial images are presented is thus interpreted as evidence of military and commercial competition which caused the eclipse of Teotihuacan and the rise of peripheral centers. The advantage of choosing this point of division around A.D. 650 is that it highlights a change in ideology which sets the stage for the remainder of Mesoamerican prehistory. The drawback is that this division underplays the continuity of economic and political systems across the ideological gap. Not only does Teotihuacan’s climax of population and wealth bridge this juncture, but the change from fertility to warrior cult imagery, or from close imitation of Teotihuacan style to the development of an eclectic mixture, occur just as strongly at Bilbao, Xochicalco, El Tajin, Cholula, and apparently at Cacaxtla.⁵ Since this cultural continuity is deemphasized, the ideological shift is viewed more as an event than a process and, with the notable exception of Pasztory (n.d.a), the nature of this process has been insufficiently investigated.

The division that Parsons’ scheme highlights is the collapse of the Middle Classic economic system in the eighth

⁵Parsons (1969: 137–142) recognized a stylistic distinction between Early and Late Middle Classic monuments at Bilbao on the basis of a change from more direct Teotihuacan imitation to an eclectic style, but he did not discuss the shift from ball game and fertility cult to warrior cult imagery corresponding to the division between Laguneta and Santa Lucia phases around A.D. 700. Similar oppositions of style or imagery are present in the other sites, although sufficient chronological data to date these changes is lacking. For example, at Cholula, purer Teotihuacan imitation is evident in the West Platform, while the Patio of the Altars combines a Teotihuacan architectural arrangement with Zapotec influence in the architectural decoration and Mayoid stelae decorated with Veracruz interlace scrolls, an excellent example of the eclectic style. At Cacaxtla, murals in purer Teotihuacan style apparently predate the well-known eclectic style Battle Murals (S. Bardsley, personal communication from M. Foncerrada). Perhaps the clearest contrast occurs at Xochicalco, where the stelae of Structure A represent fertility cult imagery involving some direct imitation of Teotihuacan iconography, while the relief decorations of the Pyramid of the Plumed Serpent present warrior cult imagery in the eclectic style.

century, resulting in the devastation and at least partial depopulation of major cities such as Teotihuacan and Monte Alban. This same division is emphasized in Sanders' terminology, where Middle Classic is replaced by Middle Horizon, and it is reflected in the discussions of the Coyotlatelco phase in this volume by Diehl and by Mastache and Cobean. The eclectic style, which Parsons (1969: 164) was the first to recognize and define, is thereby interpreted as a reflection of more equal economic competition between Teotihuacan and the newly competitive sites. The advantage of Parsons' and Sanders' scheme is that it emphasizes the continuity of both the separate political entities and of the widespread commercial system from its inception under Teotihuacan's Xolalpan phase expansion through its continuation, with competition from other centers, during Teotihuacan's Metepec phase. The drawback of this scheme is that it ignores the important shifts in cult emphasis, ideology, and world view which set the stage for all future developments in Mesoamerica.

Although the designation of the eclectic styles as either Epiclassic or Middle Classic depends largely on these differing perspectives and emphases, one important conflict remains unresolved. Did competition from the sites with eclectic styles weaken Teotihuacan and allow these sites to subsequently profit from its decline, as indicated by the model of decentralization on which the Epiclassic scheme is based, or did Teotihuacan flourish and decline in tandem with these competing centers, as suggested by the Middle Classic scheme and modified by the model of expansion and contraction presented here? At present we have insufficient archaeological information to choose between these alternatives. For the sites discussed in this volume as typical of the Epiclassic, there appear to be no monuments datable to the century between the collapse of Teotihuacan around A.D. 750 and the Terminal Classic revival which began around A.D. 850. We can only be sure that the eclectic nature of the artistic tradition that spread throughout Mesoamerica between A.D. 650 and 750 does not in itself constitute evidence for a decline in Teotihuacan's power or wealth, since both were maintained or even increased during this period.

An issue of far-reaching importance to Mesoamerican prehistory is at stake here. The Epiclassic model treats Teotihuacan as fundamentally different from other Classic city-states, and thus perceives its decline as separate from the general collapse of Classic Mesoamerican culture by A.D. 900. By contrast, the model of expansion and contraction perceives Teotihuacan as fundamentally similar to other Classic Mesoamerican states and its demise as one event in a single widespread collapse that required a century and a half to achieve totality. In support of this latter view, the Classic Maya collapse required a full century of this long span, since all the great sites of the Usumacinta and Motagua River regions ceased erecting monuments after A.D. 810. As the Classic Maya collapse begins only sixty years after the supposed collapse of Teotihuacan in A.D. 750, the two events may have been part of the same process.

Theories and Preconceptions on Dating

The Epiclassic model, as proposed by Jiménez Moreno and Webb, and as explored by several contributors to this volume, does not do justice to the city that typifies Epiclassic traits on the grandest scale—Chichen Itza. In this volume Ball and Taschek and Kowalski instead discuss Chichen Itza from the perspective of the Terminal Classic revival, which represents a different problem and a different period. If the Epiclassic model is valid, then it should include the dramatic development of an eclectic style and militaristic iconography at this Yucatec city.

The bases for Chichen Itza's exceptional size and power, insofar as they are presently known, support incorporation into the Epiclassic sphere. Ball and Taschek (this volume) show that the Itza, who originated in Coastal Campeche and first rose to prominence as participants in the Teotihuacan economic system, later founded an enclave at Chichen Itza to take advantage of the economic potential of its location. Chichen Itza is situated midway between the Gulf and Caribbean coasts, at a point where it could control the transport of goods across and around the peninsula, as well as dominating salt flats on Yucatan's north shore. Typical of the interactive node, Chichen Itza would also function as a redistribution center for local markets throughout the Yucatan plain. Chichen Itza was built adjacent to the Sacred Cenote, which even after the Spanish Conquest remained the most sacred shrine and pilgrimage goal for all of Yucatan (Tozzer 1957: 185, 200). That such combinations of economic and religious activity may encourage the growth of a major city is amply demonstrated at Teotihuacan, whose most ancient shrine may have been the cave beneath the Pyramid of the Sun (Millon 1981: 231–235). Chichen Itza grew to become one of the largest cities in Mesoamerica, planned like nearby Coba with an urban nucleus or downtown connected by causeways to several suburban complexes and satellite towns (G. Andrews 1975: 20).

Although the total size and extent of Chichen Itza have not been determined, the many cleared and restored monuments provide adequate testimony to its unique achievements. Construction technology at this site was remarkable, as may be seen in the West Colonnade, whose four corbeled vaults rested on at least 228 columns; or the Caracol, with its annular vaults, winding interior stairway, and second-story observatory; or the Great Ball Court, which at 167 m in length is the largest ball court in the New World. The carvers and painters of Chichen Itza were also extraordinarily inventive. The interior reliefs of the Lower Temple of the Jaguars include 117 figures, each distinguished by costume, attributes, and often by image-signs, and including the earliest known representations in Mesoamerica of the sun disk or the one-legged deity with a smoking mirror in his headdress, called Tezcatlipoca by the Aztec; and the battle murals of the Upper Temple of the Jaguars involve the most advanced use of perspective in all Pre-Columbian art

(Cohodas 1978: 66). Despite their scale and innovation, archaeologists typically consider that these monuments merely reflect ideas or follow trends that originated elsewhere. The intense elaboration in monumental art of ideas characteristic of the Central Mexican tradition is conventionally explained as the result of invasion or colonization, and is referred to by Lincoln (1986: 143) as acculturation. Archaeologists have been reluctant to view this adoption of non-Maya ideas as a conscious choice by the rulers and artists of Chichen Itza to ally themselves further with the economic and political system of Highland Central Mexico.

This devaluation of Chichen Itza arises from the preconceived notion of a Maya-to-Toltec sequence, applicable to the entire Maya area, but visible in microcosm in the contrast between native Maya and Mexicanized styles at Chichen Itza. The architects of this hypothesis, including Thompson (1945), Brainerd (1958), and Tozzer (1957), considered the Maya style buildings to represent a Classic period settlement that was replaced in Post-Classic times by invading Toltecs (Lincoln 1986: 142–145). As a result the Mexicanized monuments of Chichen Itza were considered imitations of those at Tula, based on Quetzalcoatl's desire to recreate the capital from which he had been expelled. The monumental sculpture of Chichen Itza has likewise ceased to be treated in its own right, but is instead used as a yardstick by which to measure the degree of Toltec character in the art of other sites. For this reason Xochicalco and Bilbao were initially dated to the Toltec era, before the absence of Early Post-Classic horizon markers forced their redating to the Classic period. Kubler's (1961) attempt to redress this devaluation, in which he noted that both comparisons of scale and of chronological development suggest that Tula was instead built in imitation of Chichen Itza, has not been accepted.

Recent attention focused on Chichen Itza has involved a reevaluation of the data on which this Maya-to-Toltec sequence was based. Although Lincoln (1986: 142–145) and others have demonstrated the ways in which earlier archaeologists distorted their interpretations to fit this preconceived sequence, they do not attempt to explain the underlying reasons why this scheme should merit upholding in the face of so much contradictory evidence. Baddeley (1983: 57–58) has provided the key to understanding this process, noting the ways in which we classify New World cultures according to our preconceptions about the Old World. Our perception of historical change as repeating the succession from Classical Greece to imperial Rome is certainly applicable since, at the time that this Mesoamerican sequence was hypothesized, the Maya were considered to have been a peaceful, theocratic culture, in contrast to the militaristic Toltec. Our views about history have been shaped as well by literary sources, from the Bible to Hollywood scripts, which carry even greater emotional and psychological impact. In particular, since biblical events are narrated from a religious point of view, the contrast of theocratic state and militaristic empire also carries the moral connotations of good versus evil. Archaeology is as much a humanistic discipline as a science, requiring intuition to make the leaps of imagination that turn scattered

artifacts into historical reconstructions. It is not surprising that under such constant indoctrination we would continue to select and interpret data according to a preconceived notion of historical change, just as Maya chroniclers of Post-Conquest Yucatan reconstructed their history in terms of preconceived cyclic patterns.

Although the last decade has witnessed an important change in the dating of Chichen Itza, the underlying assumptions have not changed, and they continue to affect our interpretation of the data. The recent revision culminates the scholarly discourse begun by Proskouriakoff (1950: 171), who showed that the Mexicanized monuments of Chichen Itza must begin before the collapse of the Maya cities in which their influence on monumental sculpture is evident. This evidence for Mexican influence in pre-Toltec Yucatan was not unprecedented, as similar traits had been recognized within Late classic contexts at Bilbao, Xochicalco, and El Tajin. Thompson's (1970: 10–11) response was to rework his arguments identifying the Itza as a Chontal Maya group from coastal Campeche, and suggest that they carried Mexican traits to Chichen Itza a century before the arrival of Quetzalcoatl and his exiled Toltecs.

While still upholding the traditional Maya-to-Toltec sequence at Chichen Itza, E. W. Andrews IV took the second important step toward the current reevaluation by suggesting an alternate terminology for the chronological sequence of Yucatec prehistory. As Lincoln (1986: 145) explains, Brainerd's earlier terminology emphasized a cultural separation between Classic Maya and Toltec, marked by the introduction of Mexican influences in the style of architectural decoration. Brainerd called the Maya style "Florescent," while linking the Mexicanized style of Chichen Itza with Mayapan with the terms "Early Mexican" and "Late Mexican." In contrast, Andrews IV suggested a terminology that emphasizes the continuity in architectural planning and masonry technology between the developed Puuc style and the Mexicanized monuments of Chichen Itza, which he termed "Pure Florescent" and "Modified Florescent." For his major point of division, Andrews focuses on the collapse of Chichen Itza, which marks the cessation of several long-standing cultural patterns (Andrews V and Sabloff 1986: 452–453). The issue that Andrews IV raised by this alternate terminology is analogous to that considered in the previous section of this paper: the definition of an Epiclassic phase for Central Mexico parallels Brainerd's terminology for Yucatan, since both focus on changes in decorative style and iconography, as well as increasing militarism, to establish a major chronological division. By contrast, Andrews IV, like Sanders and Parsons, underlines the continuity of culture during these periods of restructuring, selecting instead the collapse of such cultures as the major point of division.

Building on these and other interpretations, archaeologists now consider the Mexicanized monuments of Chichen Itza as Terminal Classic in date, overlapping with the later monuments of the Puuc region. The search for new data that would support such models for overlapping cultural developments, and the reevaluation of old data distorted to support previous models, has produced two strong forms of evidence. First, the influence of Chichen

Itza on the Southern Maya Lowlands is most evident in Terminal Classic contexts, and it occurs in all major media: ceramic evidence was discovered at Uaxactun, in the form of Sotuta complex wares in Tepeu III contexts (Lincoln 1986: 171); sculptural evidence has been discerned in the late ninth-century stelae of Seibal (Kowalski, this volume);⁶ and architectural evidence has been noted in two structures at Nohmul (Chase and Chase 1982) dated to San Jose V.

The second form of evidence concerns the mixing or sharing of traits between the Puuc region and Chichen Itza. Archaeologists continue to uncover evidence for the contemporaneous mixing of Cehpech (Puuc) and Sotuta (Chichen Itza) complex ceramics at several sites, paralleling the consistent mixture noted by Brainerd (1958: 34–45) for Chichen Itza (Lincoln 1986: 165–183). In architecture, Andrews IV (Lincoln 1986: 146) identified close similarities in masonry technology between the latest monuments of Uxmal and the Mexicanized structures of Chichen Itza. These similarities are now considered evidence for their contemporaneity, since they are also supported by radiocarbon dates. The Monjas Quadrangle at Uxmal, one of the late structures discussed by Andrews IV, has a Carbon 14 date of A.D. 900 $\pm$ 130 (Pollock 1980: 589) which accords well with the date of A.D. 860 $\pm$ 200 (Andrews V and Sabloff 1986: 439) from the Mexicanized offering in the Balancanche cave near Chichen Itza. Kelley's earlier (1968) discovery that Kakupacal, the name of an Itza leader recorded in the Maya chronicles, appears in the Terminal Classic inscriptions at Chichen Itza between A.D. 869 and 881 fueled speculation that the Mexicanized and Maya style structures at Chichen Itza might be contemporary.⁷ Kowalski (1985; n.d.) takes this argument a step further, finding epigraphic evidence for close dynastic ties between Chichen Itza and Uxmal in the Terminal Classic. He attributes all of the late structures discussed by Andrews IV to a single ruler, whom he calls Lord Chac, and whose surviving inscriptions are dated between A.D. 905 and 907. Taken together, the combination of radiocarbon and epigraphic dates, as well as architectural and ceramic similarities, makes this Terminal Classic overlap between Lord Chac's Uxmal and Kakupacal's Chichen Itza the best-documented segment of Yucatec prehistory.

The model of Terminal Classic overlap clearly represents a revolutionary approach: for the first time, archaeologists are *looking* for evidence of contemporaneity between Maya

and Mexicanized styles in Yucatan. However, this revised approach is still far from objective, as archaeologists continue to interpret data according to the preconception that Mexican influence in Yucatan must contribute to the decline rather than the rise of Late Classic Maya culture. Examples of this distortion occur in even the most recent literature. Andrews V and Sabloff (1986: 439) cite the Terminal Classic radiocarbon date for the Balancanche cave offering but completely dismiss the earlier radiocarbon dates from the Castillo, Red House, and Iglesia as all being too early. Similarly, in discussing evidence for dating the Puuc architectural sequence, Pollock (1980: 587–589) accepts the single Terminal Classic Carbon 14 date from the Uxmal Monjas but rejects the three earlier dates from Uxmal and Sayil as being too early. Even Lincoln (1986: 147) overlooks evidence for architectural developments at Chichen Itza previous to the Terminal Classic reign of Kakupacal, ignoring the levels of construction that underlie buildings, such as the Monjas second story, that contain the Kakupacal period inscriptions.

Although the reduction of Chichen Itza to a one-phase site is clearly incorrect, as yet there is little ceramic evidence for distinguishing chronological stages. However, there is a wealth of architectural evidence derived from the excavations of Chichen Itza's major buildings. When Lincoln (1986: 193) asserts that architectural superimposition is of little use in tracing a simultaneous development of Mexicanized and Maya styles, in view of the tendency to replace one structure with another of similar type, he is incorrect on two counts. First Lincoln ignores the evidence that Mexicanized style ball courts partially underlie, and thus predate, the platforms that support the Maya style Red House and Monjas structures. Second, he also ignores the detailed evidence for the evolution of architectural form and decoration in both styles which is revealed in many examples of architectural superimposition. Although the evidence cannot be presented here, clear distinctions mark two stylistic phases that precede the Terminal Classic overlap with Uxmal and the final Early Post-Classic contact with Tula, resulting in an overall four-phase sequence for the site.⁸

This identification of two architectural phases preceding the Terminal Classic style at Chichen Itza gains greater validity and usefulness when compared with the development

⁶Chase and Chase (1982: 610) note that Yucatec influence at Seibal might derive from Uxmal rather than Chichen Itza. One may also note that among the Terminal Classic stelae of Seibal the better-dated examples are more typically Classic Maya in format, while the poorly dated stelae seem to combine influences from Chichen Itza, the Puuc region, the Cotzumalhuapa style, and perhaps other sources.

⁷Lincoln (1986: 160–161) supports Kelley's (1968) identification that the deity in the sun disk, who appears in three of the Great Ball Court temples, represents Kakupacal ("Sun-his-shield"). This would indicate that the same ruler could be represented in glyphs in Maya style structures while appearing as a pictorial image in the Mexicanized structures. Lincoln argues that such a bridge constitutes important evidence for the contemporaneity of Maya and Mexicanized styles. However, there is no evidence that the sun disk figure is a historical individual rather than a representation of the actual sun god, as suggested by the cosmic diagrams in which he appears (Cohodas 1978: 219–245).

⁸This new phase division represents a reduction from the six-phase sequence presented in an earlier publication (Cohodas 1978). The major revision from the previous analysis is redating the Temple of the Big Tables, and the style which it represents, to a period approximately contemporary with the Castillo and preceding the Temple of the Chacmoöl. This change makes sense of the alignment of the northeast corner of the Castillo toward the Temple of the Big Tables for observation of summer solstice sunrise (Cohodas n.d.), and it fits the artistic development of relief sculpture much better. Most encouragingly, it makes sense of the evolution of the major west-facing two-chambered temples used in the standard plan. These may now be shown to evolve through three distinct types: (1) those with no interior columns, as in the Upper Temple of the Jaguars, in the early part of Chichen Itza's second architectural phase; (2) those with interior columns in only one chamber, as in the Temple of the Big Tables, from the latter part of the second architectural phase; and (3) those with columns in both rooms and a fronting colonnade that partially covers the pyramid stairway, as in the Chacmoöl and Warriors Temples, from the third architectural phase.

of architecture in the Puuc region. The efforts of Pollock (1980) and G. Andrews (n.d.) to trace the evolution of Puuc style have provided us with one of the best-documented architectural sequences in Mesoamerica. Taken together, their analyses demonstrate that, following an initial period of experimentation with various styles (Early Oxkintok, Proto Puuc), the remaining history of architecture in the Puuc region involved a sequence of three well-defined styles, called the Early Puuc, Classic Puuc, and Late Uxmal styles.

The Late Uxmal style has already been discussed in terms of its Terminal Classic date, association with Lord Chac, and contemporaneity at Chichen Itza with both Mexicanized structures and Maya structures with Kakupacal period inscriptions. Andrews and Pollock have also succeeded in characterizing the evolution from Early to Classic Puuc decorative styles with such precision that the same development is easily recognized in the earlier monuments of Chichen Itza. In all six⁹ examples of architectural stratigraphy at Chichen Itza in which both early and classic traits are present, and in buildings of both Maya and Mexicanized type, the simple, plain, or stucco facades characteristic of Early Puuc style always precede the introduction of Classic Puuc mosaic masks and complex cut-stone designs. The Castillo provides an obvious example. Note that this sequence cannot be explained as a parallel evolution from simple to complex, since the architects of Chichen Itza borrowed a whole complex of specific Early Puuc decorative features, including the broken cornice, sunken panels, and roof combs, shortly before the introduction of the newer Classic Puuc fashions.¹⁰

Radiocarbon dates support this architectural evidence for a contemporaneous evolution from early to classic approaches in the Puuc area and at Chichen Itza. The three dates from classic structures in the Puuc area¹¹ average out to A.D. 695,¹² while the four dates from stylistically related structures of both Mexican and Maya type at Chichen Itza average out to a remarkably similar A.D. 693.¹³ In this light Lincoln's (1986: 170) suggestion that Classic Puuc style was introduced around 9.14.0.0.0 (A.D. 711 in the GMT correlation) does not seem too early, and it would apply as well to the introduction of mosaic mask designs at Chichen Itza, as on the east facade of the Monjas complex.

Such contemporaneous evolution from early to classic approaches also suggests that the Mexicanized style of

Chichen Itza developed before the end of Early Puuc architecture in the Puuc region. Structure A at Mul Chic provides the strongest evidence for this overlap. This temple represents the best-documented example of Early Puuc architecture, since its decoration includes a roof comb, stuccoed design, and broken cornice, and since it was buried within a Classic Puuc platform. Sealed within the buried Early Puuc temple were murals painted in both Maya style and in the Mexicanized style of Chichen Itza. Although more dramatic, this combination of traits is no different in kind from the mixture of Early Puuc and Mexicanized ceramics that Bolles found cached beneath the central marker of the Monjas ball court (Brainerd 1958: 43; L. A. Parsons, personal communication). While there is no secure evidence to date either the Early Puuc temples or the related structures of Chichen Itza,¹⁴ the dates cited above for the Classic Puuc phase suggest that the Mul Chic temple dates no later than the early eighth century. By the same token, the beginnings of the Early Puuc and Chichen Itza styles may reach back into the late seventh century.¹⁵

In summary, although the inception of monumental art at Chichen Itza cannot be dated with precision, the Mexicanized style must have developed by the early eighth century, when the Mul Chic murals were likely painted, and thus before the fall of Teotihuacan in the mid eighth century. The subsequent evolution of monumental art at Chichen Itza may be traced through four stylistic phases, culminating in the Early Post-Classic Mausolea platforms which are most closely related to Mazapan architecture at Tula.¹⁶ This unbroken sequence from Late Classic through Early Post-Classic periods is unique among the larger settlements of Mesoamerica. Furthermore, the artists of Chichen Itza continued to elaborate elements characteristic of the Mexican Highland art tradition during the period of artistic impoverishment (Coyotlatelco phase) in the Basin of Mexico. The disjunction in cult symbolism (although not in

¹⁴Pollock uses the initial series date of A.D. 744 at Xcalumkin to anchor his Early Puuc style. However, the Xcalumkin temple is constructed and decorated in a regional style that departs from the development of Early and Classic Puuc architecture. If indeed one might relate this temple to the Puuc sequence, it would have to be with the Classic Puuc phase, on the basis of shared emphasis on stone facade decorations, as well as a clear development from Early Puuc-related predecessors, here the Huntichmul temple (Pollock 1980: 345–346) with its broken cornice.

¹⁵Pasztor (1972: 443–444) noted that Parsons' redating of the Great Ball Court to the seventh century brought the elaboration of the ball game cult at Chichen Itza into line with the general late seventh-century height of this cult throughout Mesoamerica. More important, this redating restores primacy to this court as the setter rather than the follower of trends. The widespread image of a skull-decorated ball and a decapitated player with serpents sprouting from his severed neck, which appears in the cylinder tripods of Escuintla as well as on monumental sculpture at Bilbao (Parsons 1969: pl. 42c), El Tajin, and Aparicio, could then be understood as an imitation of the monumental bench reliefs of Chichen Itza, which must have impressed both local viewers and visiting merchants or dignitaries.

¹⁶Thompson's (1937: 185) date for the Osario or High Priest's Grave column as equivalent to 10.8.10.11.0 2 Ahau 18 Mol, in the 11th tun of a katun 2 Ahau, or A.D. 998 in the GMT correlation, contradicts the sequence suggested here, in which all vaulted architecture at Chichen Itza ceases around the end of the Classic period, ca. A.D. 900. Thompson's reading is based on application of the method deduced from the Initial Series lintel and recognized in all of the Kakupacal-related inscriptions. However, the Osario inscription may be of a different, period-ending type, and thus deserves reanalysis.

⁹The six examples of such stratigraphy are: Castillo, Red House, Monjas, Temple of the Warriors, Temple of the Phalli group, and Caracol.

¹⁰The large-scale imitation of Early Puuc decorative traits appears at the beginning of the second architectural phase, as on the Castillo-sub, while the introduction of Classic Puuc mosaic masks occurs slightly later within the same phase, as on the outer Castillo.

¹¹Since Pollock did not differentiate the Classic Puuc from Late Uxmal styles, he assumed that the entire Classic Puuc phase must be Terminal Classic, and he thus eliminated the three earlier Carbon 14 dates from consideration.

¹²These dates are A.D. 560 ± 60 from the first stage of the Magician complex at Uxmal; A.D. 740 ± 60 from the House of the Birds at Uxmal; and A.D. 720 ± 60 from the upper story of the Sayil Palace (Andrews V 1979: 4).

¹³These dates are A.D. 790 ± 70 from the Castillo; A.D. 610 ± 60 from the Red House; and both A.D. 600 ± 70 and A.D. 780 ± 70 from the Iglesia (Andrews V 1979: 4).

style, as explained above) evident between the monuments of Teotihuacan and Tula, but not between those of Tula and Tenochtitlan, must be due to incorporating the results of an evolution that took place at Chichen Itza. We need to analyze this evolution, not by devaluing the artists of Chichen Itza as mere imitators of foreign ideas, but by recognizing their innovation, especially during those periods when Chichen Itza may have been the most influential city in Mesoamerica.

Epiclassic Art at Chichen Itza

The evidence for an overlap with the Metepec phase reopens the possibility that Chichen Itza participated in the Epiclassic restructuring that swept Mesoamerica before the fall of Teotihuacan. When viewed in this chronological context, many similarities between Chichen Itza and other Epiclassic sites are brought into sharper focus. As in other regions, an earlier phase of direct imitation of Xolalpan art, represented by the Yaxuna stela carved with the image of a Teotihuacan warrior (Brainerd 1958: fig. A) like those on Tikal Stela 31 and the jambs of Tomb 5 at Huijazoo (Mendez Martinez 1986), documents incorporation into the Teotihuacan economic system. In founding their enclave at Chichen Itza during the succeeding phase of increased competition with Teotihuacan, the Itza were thus moving to control a region that had already become involved in the Teotihuacan network, a reconstruction consistent with Ball and Taschek's (this volume) analysis of Itza commercial expansion.

Those characteristics that are believed to define the style and iconography of Epiclassic monumental art (Nagao, this volume) are strongly evident at Chichen Itza. The figural art style developed by the Itza is completely eclectic, combining Maya proportions and secondary deity images with Central Mexican anthropomorphic deities and image-signs, and at times placing these within a Coastal Lowland narrative context including interaction between figures and a suggestion of setting (Cohodas 1978: 18–25). An increasing emphasis on warfare is evident in the six battle murals in the Upper Temple of the Jaguars, while construction of fortifications is indicated by the wall surrounding the

North Terrace (Ruppert 1952: 2). Most important, a shift from ball game and other fertility cults to the imagery of the new warrior cult is clearly marked in the Mexicanized monuments of Chichen Itza, where it occurs at the beginning of the second architectural phase (Cohodas 1978: 248–260) and is accompanied by renewed eclecticism in the borrowing of Early Puuc decorative traits. While this shift would be out of place in the Terminal Classic period when the warrior cult was firmly entrenched, it is characteristic of the Epiclassic phase and may be noted in the art of Xochicalco, El Tajin, and Bilbao as well as Teotihuacan.¹⁷

Although Chichen Itza has rarely been considered in the context of this Epiclassic shift, evidence from radiocarbon dating confirms contemporaneity with other Epiclassic sites. The range of Carbon 14 dates for the second architectural phase at Chichen Itza not only duplicates those from Classic Puuc structures but also encompasses the same range shared by radiocarbon determinations from such Epiclassic sites as Xochicalco (Hirth 1980: 263), Cacaxtla (Baird, this volume), and Lambityeco (Winter, this volume). In the past, Carbon 14 dates for Chichen Itza and Classic Puuc architecture have been rejected as unusable. We cannot continue to dismiss consistent clusters of related dates because they do not fit our preconceived chronological schemes, or we will invalidate radiocarbon dating entirely.

The preconception that Mexican influence in Yucatan must be limited to the Terminal Classic or Early Post-Classic decline of Maya culture has kept us from considering Chichen Itza in this Epiclassic context. However, there are no Epiclassic traits that do not appear, in grandest scale, in the first two architectural phases at Chichen Itza. Therefore, if Chichen Itza was active during the Epiclassic period, as the monuments and the Carbon 14 dates suggest, it must have been one of the major agents in this widespread restructuring.

¹⁷Contrasts of fertility and warrior cult iconography for Bilbao and Xochicalco are mentioned in note 5 above. At El Tajin the reliefs of the South Ball Court mark the transition between earlier fertility cult sculpture, as in the North Ball Court and Niches Pyramid, and later warrior cult compositions, as in the carved columns. In fact, the paired panels of the South Ball Court are designed in part to express the parallels between fertility and warrior cult symbolism.



Fig. 2 Chichen Itza, Mercado, north face of dais in Gallery. William L. Lincoln drawing. (After Ruppert 1943: fig. 23). Courtesy Carnegie Institution of Washington.

Epiclassic Comparisons in Monumental Art

The processional dais and the imagery of ethnic opposition, two traits that link the monumental art of Chichen Itza with that of other Epiclassic sites, illuminate some of the roles that Chichen Itza played during this period of reorganization.

At Chichen Itza the procession of prisoners bound together by rope, which is typical of the second architectural phase, may be seen on the Mercado dais (Fig. 2). On the *talud* of this dais, the central eagle-man sacrificer and his two excised victims are flanked by files of bound prisoners, each distinguished by an image-sign. In this martial context, the image-signs could refer either to the prisoners' names (nominative) or to their town of origin (toponymic), as a conquest or tribute list. The *tablero* of this dais features feathered serpents arranged in a meander format with star signs in the intervening spaces. (See Baird, this volume, for a discussion of the star sign.)

The source of this configuration on the Mercado dais may be traced to Teotihuacan. At Techinantitla, an unusual dais-like bench was similarly decorated: the *talud* contained depictions of plants with nine different signs, almost certain toponymic in function, while the *tablero* was painted with feathered serpents (Pasztory, n.d.a). In the contemporary Maguey Priest murals, apparently from an adjacent compound (Pasztory, n.d.a) the upper border contains a serpent in the same meander format with avian motifs in the intervening spaces. The artists of Chichen Itza must have seen designs of this type, since they also recreated the unique serrated serpent body in the wall mural of the Chacmool temple (Morris et al. 1931: 2, pl. 132) and perhaps in the Mercado gallery (Ruppert 1943: 230).

While the Mercado dais configuration appears to have been synthesized from at least two sources at Teotihuacan, the carving on the Pyramid of the Plumed Serpent at Xochicalco represents an alternate evolution from the same sources. The artists at Xochicalco inverted their scheme, placing the feathered serpent on the *talud*, in the usual meander format with Mayoid figures and glyph cartouches in the intervening spaces, while they placed the toponymic series, here with seated Mexican figures, in the *tablero*. The similarities between these possible toponymic series at Teotihuacan, Xochicalco, and Chichen Itza, suggest not

only that they are historically related but also that they may be approximately contemporaneous.

The processional dais continued to evolve at Chichen Itza, as a new type was introduced in the third architectural phase, in the colonnades that surround the Temple of the Warriors. Although this Terminal Classic type (Morris et al. 1931: 2, pls. 124–129) retains the format of feathered serpent *tablero* and processional dais, earlier depictions of prisoners with toponymics and a sacrificial scene are now replaced by war and fertility deities flanked an offering vessel, and the serpent meander is flattened out with no room for intervening motifs. The processional reliefs in the Palacio Quemado of Tula are exactly of this late type from the Temple of the Warriors complex, and they in turn appear to have served as the models for early Aztec artists, as seen in the bench relief in the House of the Eagles, within the Templo Mayor complex of Tenochtitlan.¹⁸ The development of the processional dais at Chichen Itza would seem to provide a link between its origin at Teotihuacan and the later elaboration at Tula and Tenochtitlan.

A second trait shared among several Epiclassic sites is the juxtaposition of figures who are ethnically differentiated as Highland Mexican and Lowland Maya. Several authors, most recently Pasztory (n.d.b) have studied the Early Middle Classic examples contemporary with Xolalpan Teotihuacan, as they appear on Tikal Stela 31 or Monte Alban's Lapida de Bazan, but no comparison has yet been made of the Epiclassic versions contemporary with Metepec Teotihuacan. These Epiclassic forms of ethnic opposition fall into two repeated categories, both of which are evident at Cacaxtla: (1) the equal opposition of two figures, often flanking a doorway, as in Structure A; and (2) the unequal relationship between Mexican captor and Maya victim, as elaborated in the Battle Mural of Structure B.¹⁹

¹⁸Ultimately the Aztec transformed this processional dais into a sacrificial altar. They reduced the format to a square, straight-sided monolith in the Stone of the Warriors (Nicholson 1971: fig. 57), then transformed it into a circular altar in the Tizoc Stone (Nicholson 1971: fig. 58). While eliminating the feathered serpent border in favor of sky and earth bands, the Tizoc Stone artist also reintroduced the prisoner series with toponymics.

¹⁹The ethnic opposition between Maya and Mexican figures on the Pyramid of the Plumed Serpent at Xochicalco does not appear to represent a widespread approach and will not be discussed here.

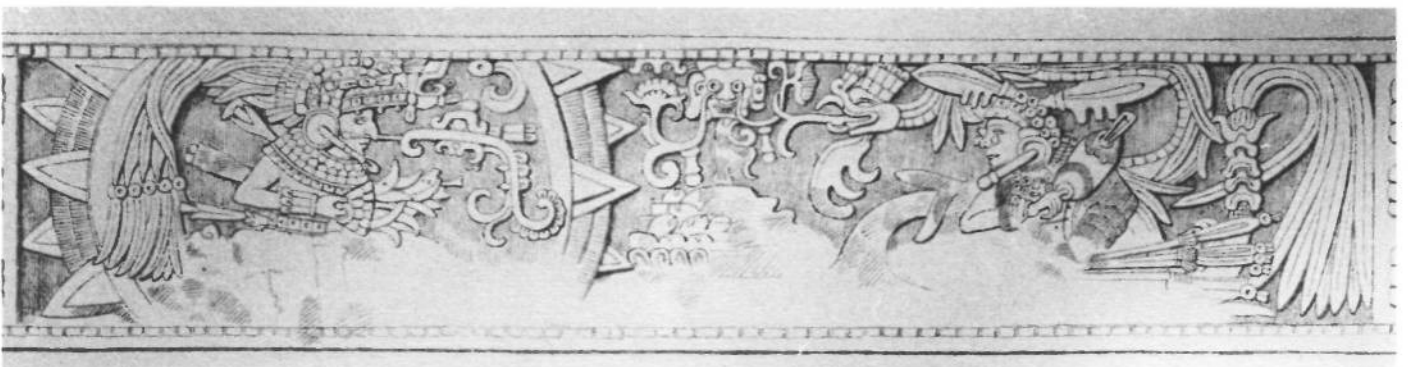


Fig. 3 Chichen Itza, Upper Temple of the Jaguars, lintel over inner door: drawing of east face by A. Hunter (after Maudslay 1889–1902, 3: pl. 35). Courtesy of Milpatron Corp.

Beginning with the equal opposition, the examples closest to those of Cacaxtla Structure A are found in the Upper Temple of the Jaguars at Chichen Itza. In this temple similar confrontations are depicted in three media: in mural painting at the center of the back wall, in stone carving on the top of the atlantean table altar placed in front of this mural, and in wood carving on the three sides of the lintel over the entrance to the rear chamber (Fig. 3). At both Cacaxtla and Chichen Itza, the Mexican figure always appears to the north of the temple's axis, while the Maya figure always remains on the south, even though, in the Upper Temple of the Jaguars, maintaining this correct directional association required reversal of the composition on the rear face of the lintel. At both sites these figures occur within clear warrior cult contexts. The larger pair at Cacaxtla are differentiated as jaguar and eagle impersonators, while those on the Upper Temple of the Jaguars lintel, differentiated by the sun disk and feathered serpent attributes, appear to represent the Sun and Venus gods who function as the hero twins in warrior cult mythology.

These warrior cult oppositions of Maya and Mexican figures develop from earlier versions associated with the ball game and other fertility cults. The earlier bench reliefs of the Great Ball Court at Chichen Itza show ethnically opposed teams in the postgame ritual of decapitation. The opposition of Mexican and Maya players is here amplified by a contrast of astral and fertility symbolism,²⁰ supporting Krickeberg's (1966: 225) argument that the ball game represents the battle between the forces of light and upperworld and the forces of darkness and the underworld. The association of Mexican figures with the upperworld and Maya with the underworld is repeated in the contemporary reliefs of the Lower Temple of the Jaguars, where they occupy the upper and lower registers respectively.

A further precedent for the imagery of ethnic opposition in the Cacaxtla murals of Structure A and in the Upper Temple of the Jaguars may be identified in the Tlalocan complex of Tepantitla, in the paired *taluds* that occupy the most important wall of the patio, flanking the doorway to the eastern room (Pasztory 1976: 64). The context is similar: a passageway leading from an exterior in the west to an interior in the east, with an opposition of upperworld imagery on the north and underworld imagery on the south. Although ethnic oppositions are here subdued in favor of fertility imagery, the contrast of the Highland Mexican stickball game on the north with the Lowland Maya hipball game on the south appears to represent an opposition of astral and fertility symbolism as well as upperworld and underworld. In their appearance in the Venus cycle of the Codex Borgia, these two games are also designed to illustrate a contrast of Venus (page 42) and solar (page 35) symbolism, as noted with the opposed figures on the lintels of the Upper Temple of the Jaguars. The directional associations and symbolic connotations of this ethnic opposition of Mexican and Mayan are consistent

²⁰The first four members of the Mexican team are always shown with specific costume elements that carry astronomical connotations, associating them with the sun, Venus, moon, and either Mars or the evening star aspect of Venus.

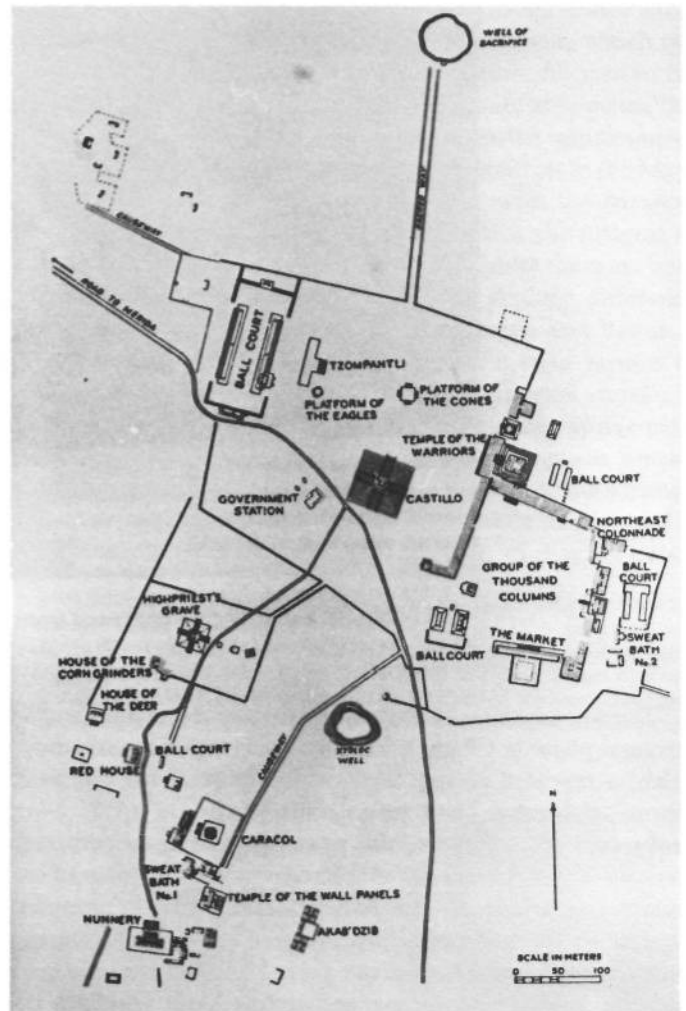


Fig. 4 Chichen Itza, plan of urban nucleus showing the North Terrace and Maya-Chichen groups (after Morley 1956: fig. 11.65).

in their appearances at Teotihuacan, Cacaxtla, and Chichen Itza.

Understanding its standard elements allows us to identify the most colossal statement of ethnic opposition in the urban plan of downtown Chichen Itza (Fig. 4). Mexicanized and Maya style buildings, which had both existed since the inception of monumental architecture at Chichen Itza, were freely mixed only in the outlying or secondary groups. In contrast, they were generally kept separate in the urban nucleus of the city. Mexicanized monuments were built in the North Terrace group, while Maya style buildings occupied the Maya-Chichen group to the south. With the introduction of the warrior cult in the second architectural phase, the contrast between these two groups increased. Hieroglyphic writing and fertility images were excluded from the North Terrace, leaving only the warrior deities, while decorations in the Maya-Chichen group instead featured ruler images with hieroglyphic inscriptions. Carbon 14 evidence (see above) suggests that this climax of Chichen Itza's ethnically differentiated downtown planning scheme is contemporary with the general climax of Epiclassic traits throughout Mesoamerica.

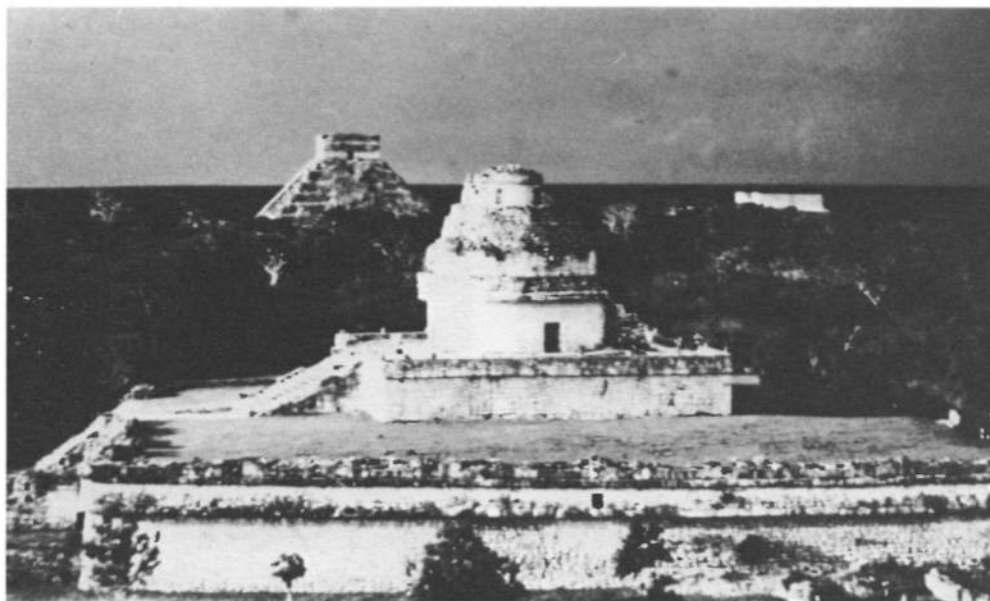


Fig. 5 Caracol and Castillo as viewed from Las Monjas at Chichen Itza.

The introduction of the warrior cult in the second architectural phase at Chichen Itza also inaugurates the standard plan, a repeated arrangement of structures with specified form, placement, and orientation (Cohodas 1978: 2–5; 1985: 53–54). Of these, the west-facing, two-chambered temple is associated with ethnic oppositions in most of its many repetitions on the North Terrace. These temples appear to be astronomically oriented toward the setting midsummer sun. During the period around the summer solstice, perhaps beginning and ending with the dates of zenith passage which symmetrically flank it, rays of the setting sun would be seen to pass down the central axis of such temples, to light the atlantean altar and mural panel above it at the center of the back wall (Cohodas n.d.). The temple thus forms a passage or gateway for the setting sun, perhaps symbolic of the horizon through which the sun passes into the underworld. As the rays of the setting sun pass down the central axis of the Upper Temple of the Jaguars, they also pass between the opposed Mexican and Maya warriors, on the lintel, altar, and mural. Note that while the alignment of the Upper Temple of the Jaguars is limited by the Teotihuacan-derived 17-degree orientation of the ball court platform on which it rests, an alignment that is shared by the Tepantitla doorway and Cacaxtla Structure A, subsequent examples at Chichen Itza are more accurately oriented toward midsummer sun, at approximately 20–23 degrees north of west (Aveni 1980: 312).

The design of temples to symbolize the passageway for the setting sun achieves its most sophisticated and monumental conception in the Castillo and Caracol, constructed as a pair in the latter part of Chichen Itza's second architectural phase. Not only are both temples oriented in relation to the midsummer sunset, but they are also aligned with respect to each other (Fig. 5) along an axis perpendicular to that sunset alignment. Consequently, the rays of the setting sun would be perceived as passing between them, just as they pass through the serpent columns of west-facing

temples like the Upper Temple of the Jaguars. According to Seler (1963: 2, 24), the Aztec conceived of the sun setting through a gateway formed of red and black pillars, representing the colors of the sky and earth at sunset. In the Venus section of the Codex Borgia, red and black temples function as a passageway through which the sun and Venus enter into and traverse the underworld. The images of these two temples are also contrasted by their square and round shape, exactly as with the Castillo and Caracol. That similar concepts inspired the Chichen Itza architects is evident from the stylobate, constructed with an earlier phase of the Caracol tower, and preserved in a niche within the final stairway: its two miniature columns, which likewise form a gateway facing the setting sun, are actually painted red and black (Ruppert 1935: 150).

As with the processional dais, the use of ethnic opposition continues to evolve at Chichen Itza. In the third architectural phase, corresponding to the Terminal Classic period, the restrictions in planning and decoration within the opposed architectural complexes are slightly relaxed. The Osario may have been erected in the North Terrace at this time,²¹ with a Maya hieroglyphic inscription juxtaposed with a Mexican warrior. Similarly, the second-story structure of the Monjas in the Maya-Chichen group was furnished not only with hieroglyphic lintels comprising the largest corpus of Kakupacal period inscriptions but also with battle murals in the Mexicanized style.

A significant change occurs in the use of ethnic opposition within the west-facing temple, as seen in the painted benches of the Chacmool temple, whose construction inaugurates the third architectural phase. No longer opposing Mexican and Maya warriors as Venus and the sun, these murals now oppose Mexican warriors on the north with Maya fertility deities, both male and female, on the south

²¹See note 16 above for a discussion of the problem of dating this structure.



Fig. 6 Chichen Itza, Sacred Cenote, Gold Disk F. T. Proskouriakoff drawing. (After Lothrop 1952: fig. 34). Reprinted with the permission of the Peabody Museum of Archaeology and Ethnology, Harvard University.

(Morris et al. 1931: 2, pls. 35–37, 133–134). Similarly, the double temple in Tenochtitlan was designed to function as a solar gateway (Motolinía in Aveni 1980: 246), with the sun's rays passing between temples dedicated to opposed gods of war and fertility. At Tenochtitlan, this event took place on the vernal equinox, not in midsummer, but it signaled the most important warrior cult ceremony of the festival year, the gladiatorial combat of *Tlacaxipehualiztli*.

A comparison with this Aztec ritual helps clarify the relationship between two Epiclassic traits: the function of west-facing temples as solar gateways and the pairing of Mexican and Maya warriors as the sun and Venus. In the ceremony of gladiatorial combat, the victim is first slashed by warriors impersonating eagles and jaguars, both animals associated with the sun. The captive himself is called an eagle-man (Sahagún 1950–82, bk. 2: 52), and his club is tipped with eagle feathers. Probably he represents the sun as a more passive victim who must be sacrificed in order to enter the underworld, where his transformation from death to rebirth will renew the crops. In Structure A at Cacaxtla and the Upper Temple at the Jaguars at Chichen Itza, the passage of the sun's rays between the Venus and solar warriors would then represent his sacrifice at their hands, as he penetrates the surface of the earth in order to enter the underworld. Together the temple and the paired warriors represent the sun's passage as a sacrificial act. Positioned to the north and south of this sunset axis, the Mexican and Maya warriors also personify the sky and earth, or up-
perworld and underworld, which flank the sun as it traverses the horizon.²²

²²Personifications of the sky and underworld as paired sacrificers of the setting sun are common in Middle to Late Classic Maya art, as in the images of the Paddler Gods and the youthful warriors with snake and jaguar spot markings. The Paddler Gods may actually first appear in the inscription of Tikal Stela 31, where the ruler is likewise shown flanked by two Mexican warriors. The association of paired sacrificers of earth and sky as jaguar and snake is more widespread, and it also appears in the animal attributes accorded the solar and Venus warriors in the reliefs at Chichen Itza.

The sacrifice of the passive solar deity is illustrated more clearly in the second type of ethnic opposition, which opposes Mexican warriors and Maya victims. As seen in the jade and gold disks from the Sacred Cenote at Chichen Itza (Fig. 6), two Mexican warriors are shown capturing or sacrificing one or two Maya victims. In contrast to the Maya warrior as sun god in equal opposition with the Mexican warrior as Venus, these Maya victims lack the insignia of divinity or royalty. The warriors who capture them are both shown in Mexican costume, although slightly differentiated, suggesting that they represent the sun and Venus as twin warrior cult heroes or perhaps the twin aspects of Venus.²³ This increased level of duality appears equally in the Cacaxtla Battle Mural, where two captor-captive pairs symmetrically flanking the central stair are given greater emphasis by their richer costumes, by the captive's frontal posture, and by the captor's mask. The stela pair erected at Dos Pilas and Aguateca in A.D. 736 (Fig. 7) may indicate a

²³Similar oppositions of Mexican warriors appear on the pilasters of the Upper Temple of the Jaguars. Those flanking the front door are most clearly differentiated. The warriors on the south side carry solar attributes of jaguars and birds, while those on the north side carry Venus attributes of snakes and star signs. This suggests that the paired warriors on the gold disks still represent Venus and the sun as twin warrior cult heroes.

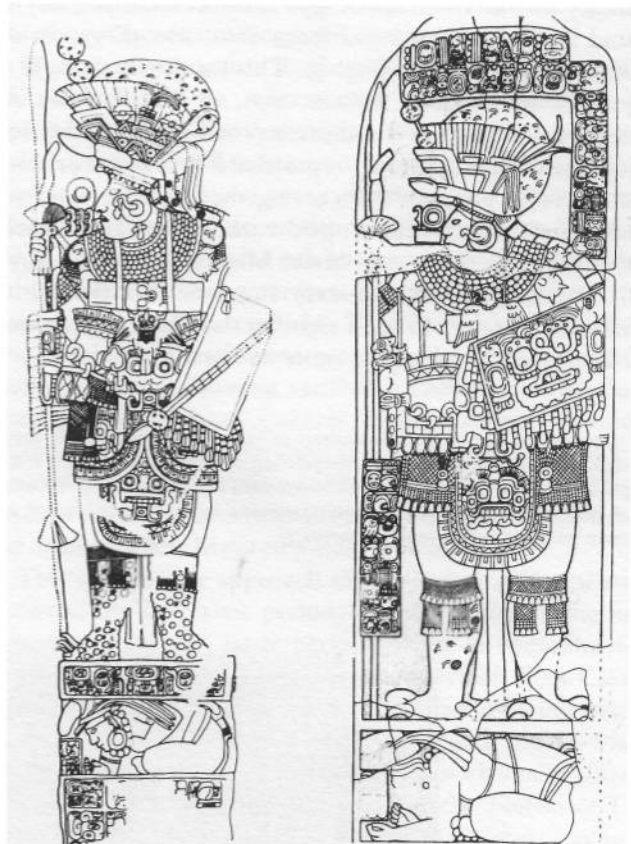


Fig. 7 Dos Pilas Stela 16 (left) and Aguateca Stela 2 (right), erected in A.D. 736 (9.15.5.0.0). Although both stelae depict the Dos Pilas ruler victorious over the ruler of Seibal, the jaguar markings on the victor's feet of the Dos Pilas Stela contrast with eagle talons on the Aguateca Stela, forming the warrior cult pair of jaguar and eagle images. (After Schele and Miller 1986: fig. V.4; and Graham 1967: fig. 5). Courtesy of Kimbell Art Museum and Middle American Research Institute, Tulane University, New Orleans.

similar duality. Although both stelae show the Dos Pilas ruler in Teotihuacan-derived costume as victorious over the Seibal ruler in Maya dress, the opposed animal traits of the two ruler images as eagle and jaguar suggest the concept of paired warrior cult sacrificers.

Interpretation

These two forms of ethnic opposition in Epiclassic art may be interpreted on other levels in addition to the context of warrior cult myth and ritual. Ethnic opposition does occur in historical contexts, as in the proclamation of Seibal's defeat at the hands of a Dos Pilas ruler, but the ethnic contrasts give information that is not historical. For example, despite his array in a Teotihuacan-derived costume, the Dos Pilas ruler was not of Mexican origin. The significance of these ethnic oppositions must be interpreted on a more ideological level, as Stone demonstrates in her contribution to this volume.²⁴

Whether one compares the Piedras Negras warrior stelae with Post-Conquest references to the Mexicanized Itza, as Stone does, or one compares the two forms of ethnic opposition that appear at Cacaxtla and Chichen Itza, as presented here, it becomes apparent that the Maya associated Central Highland Mexico with two specific qualities: military power and technology. Another example may be found in the exterior relief from Structure 5D-57 in the Tikal Palace Acropolis (Fig. 8). This carving is thought to represent the victory, in A.D. 695, of Tikal's ruler Ah Cacau, represented in Teotihuacan costume, over the rival king Jaguar Paw of Site Q, represented by a Maya prisoner (Schele 1982: 269). In this carving the artist has rendered Ah Cacau in the rectilinear, gridwork style of Teotihuacan rather than the fluid, curvilinear Maya style (Miller 1978: 67). Pasztory (1978: 119-120) suggests that this visual gridwork structure in itself signifies the Maya's perception of Teotihuacan culture as more rational and scientific in

their approach to the formulation and communication of ideas.

The rationale for this Maya viewpoint is clear. The governing authority of Teotihuacan was able to resettle the population in the Basin of Mexico and to control its labor for the building of regularized apartment compounds arranged in a grid plan of streets and avenues, for the building of irrigation ditches and canals, and for the mining, manufacture, and shipment of obsidian tools. As the control over the environment and specialization of labor at Teotihuacan far exceeded that of any contemporary Maya city, Teotihuacan culture would naturally have represented order, technology, and progress to the Maya. Further, Teotihuacan's efficiency in labor management would undoubtedly have led to a more sophisticated technology of warfare, earning the Mexicans a reputation as conquerors and military leaders.

The association of Teotihuacan with both military and technological superiority is most evident in the planning scheme of downtown Chichen Itza. As noted above, when the distinction between the two complexes was most rigidly maintained, the martial images in the Mexicanized structures stood in direct contrast to dynastic images in the Maya structures. Furthermore, while the Maya style monuments in the Maya-Chichen group are comparatively small in scale and are constructed with old-fashioned and unsophisticated masonry technology, the Mexicanized monuments erected contemporaneously in the North Terrace group are larger in scale and constructed with the finest veneer masonry, a technology that may also derive from Teotihuacan. The planners of Chichen Itza were not only demonstrating the interdependence of highlands and lowlands, of warriors and rulers, they were also proclaiming the superiority of technology and militarism characteristic of highland culture.

The rational analysis, efficient technology, and military strength associated with Central Highland Mexico, and particularly Teotihuacan,²⁵ in contrast perhaps to a more

²⁴Usumacinta region representations of rulers as warriors with Teotihuacan-derived insignia in their costume almost invariably involve ethnic opposition, since these rulers are shown with Maya prisoners. Lintel 25 from Structure 23 at Yaxchilan is more unusual in showing the victim as a woman who has undergone autosacrifice.

²⁵While the Highland Mexican costume elements that array Maya rulers in their role as warriors could be generalized in their reference to Central Mexico, the gridwork structure and costume elements from the Tikal Palace Relief constitute a specific reference to Teotihuacan.

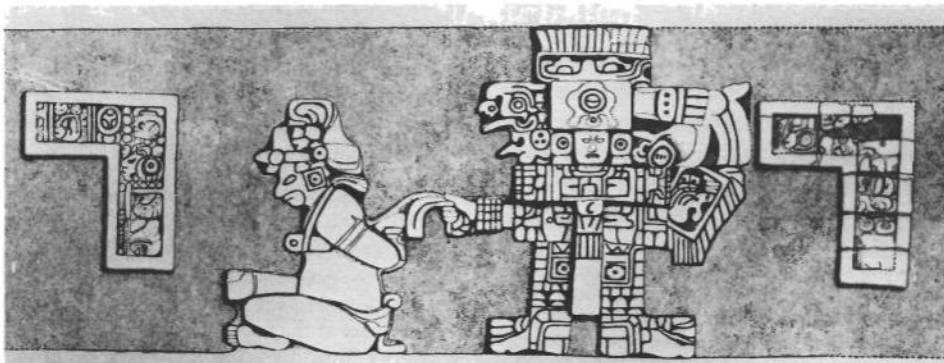


Fig. 8 Tikal, Central Acropolis (Palace), Structure 5D-57: drawing of stone and stucco relief from east facade, by Miguel Orrego. (After Miller 1978: fig. 4).

magical and superstitious bent in Lowland Maya dynastic and fertility cults, all suggest a more practical and realistic approach to the relationship between humans and their environment. The directional associations involved in Epiclassic period ethnic oppositions highlight this preference for experience above belief. The consistent association of Highland Mexican elements with the north and upperworld, versus the Lowland Maya with the south and underworld, is an abstraction of geographic reality that reverses traditional cosmography, in which the underworld is instead placed to the north. Examples of both cosmographic and geographic approaches are likewise known from Aztec times. The dedication of the double temple followed traditional cosmography in assigning the underworld fertility god *Tlaloc* to the north and the upperworld war god *Huitzilopochtli* to the south. The contrasting geographic approach is represented in the Aztec dichotomy of the Chichimec, who represent the higher, drier, and more desolate regions to the north that were associated with nomadism, hunting, and barbarity, versus the Toltec, who represent the lower and wetter regions of the southern Basin, associated with settled urban life, agriculture, and the advancements of civilization. In some contexts, any regions more tropical and at lower altitude than the Basin of Mexico could also be referred to by the Maya word *Tamoanchan*, probably a vestige of the Epiclassic dichotomy between Mexican Highlands and Maya Lowlands.

The symbolic function of this Aztec opposition between Chichimec and Toltec may also parallel that of the Epiclassic opposition of Highland Mexican and Lowland Maya. The Aztec treated their Basin of Mexico homeland as a microcosm in which the interdependence of dualistically opposed Chichimec and Toltec halves expressed a symbolic unity, just as a moiety system helps unify small-scale societies. As a universal ruler, the Aztec emperor claimed both Chichimec and Toltec descent, by way of Acamapichtli who had a Toltec mother and a Chichimec (Mexica) father.²⁶ For the Epiclassic cultures, Mesoamerica as a whole became the microcosm, and it was unified symbolically by the interdependent opposition of Highland Mexican warriors and Lowland Maya agriculturalists and dynasts, in turn representing the two halves of the cosmos in their association with upperworld and underworld. Ethnicity was only one method of expressing a cosmographic polarity, but it took on greater importance because it could also express aspects of cultural interaction and relative status, as demonstrated above.

How does this system of values and comparisons of status relate to historical changes that were taking place in the Epiclassic period? We have seen that monumental art and state ritual respond to shifts in perceived status or prestige among interacting cultures. Direct imitation of Xolalpan period Teotihuacan art and use of cylinder tripods in ritual occur when the economic advantage of

Teotihuacan far outdistances that of its trading partners, and decline at the end of the Early Classic period when increased competition leads to a decline in Teotihuacan's prestige. As other competing centers desire to proclaim equality with Teotihuacan and with each other, they form an eclectic art style. Several of these cultures also intensify the ball game as a state cult, since it stresses equal opposition and varied outcome. As a result, the ball game achieves its greatest elaboration during this period. We may now suggest that the subsequent adoption of the warrior cult indicates a further realignment of relative status. The warrior cult depends on unequal relationships between victor and victim, often graphically illustrated by the contrast of well-dressed and heavily armed warriors capturing humble and even defenseless victims. Gone also is the element of chance: in warrior cult representations, the same side always wins. Furthermore, the ethnic oppositions are now consistently bipolar, stressing only the relationship between Highland Mexico and the Maya Lowlands. The cosmological connotations of this polar opposition, as upperworld versus underworld, or war versus fertility, stress the interdependence of this relationship as two halves of a whole, a symbolically unified Mesoamerica. Not until the Aztec empire is there an equal emphasis on images of submission and on the use of ethnic opposition to represent a cosmographic polarity.

We can only speculate on the explanation for this shift in attitude reflected in monumental art and ritual in the Epiclassic period. The desired situation that these images of polar opposition and military superiority project is a tighter economic and political unity of Mexican Highlands and Maya Lowlands, given credence by recourse to the paradigm of the twin warrior cult heroes and by the cosmological implications of the contrast between war and fertility, upperworld and underworld. Epiclassic rulers may have hoped that such unification would bring increased wealth and security by allowing tariff-free exchange of highland and lowland products. Central Mexican militarism might have seemed the path to such unification, and attempts to control the Maya may have issued from the Central Highlands or from Chichen Itza, ultimately defeated by the inherent disunity of the Maya city-state system.

This interpretive approach allows a clear differentiation between the Epiclassic period, which represents the final transformation of Classic period culture in Mesoamerica, from the Terminal Classic period, in which Post-Classic patterns are initiated. The Terminal Classic period begins with the collapse of the Central Highland and Lowland Maya cultures (A.D. 750–850) and ends with a new alliance forged between the expanding Itza and the Toltecs of Tula (A.D. 850–950). Terminal Classic art at Chichen Itza indicated further shifts in prestige relationships and ideology which may prove to be characteristic of the period. Although ethnic oppositions continue at Chichen Itza, as at

²⁶A similar pattern emerged in dynastic Egypt. Upper and Lower Egypt, originally distinct cultures, came to represent the cosmographic opposition of upperworld and underworld. By wearing the insignia of both regions in his crown, the pharaoh proclaimed himself ruler of the universe.

²⁷Of the four stelae erected in front of the four stairways of structure A III at Seibal in A.D. 849 (10.1.0.0.0), two pairs are evident on the basis of Mexican versus Maya physiognomy (Greene et al. 1972: pls. 107–110). In contrast to earlier suggestions of unequal status, these pairs share the same symbolic associations and lack any evidence of rank distinctions.

Seibal,²⁷ status distinctions are reduced in favor of equality and coexistence, and the images of Mexicans conquering Maya are therefore rejected. The looser structure, and the decline in images of power, must relate to the fact that Teotihuacan was now "a shadow of its former self" (Diehl, this volume) and that most other Mesoamerican city-states were also crumbling. The subsequent Post-Classic period represents a long and interrupted process of rebuilding the strength and unity that Mesoamerica had achieved in the Epiclassic period.

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